AN INVESTIGATION INTO THE FACTORS INFLUENCING THE HEALTH STATUS OF THE COLOURED PEOPLE OF THE WESTERN CAPE IN AN URBAN SETTING

ETHELWYNN LINDA STELLENBERG

DISSERTATION SUBMITTED IN PARTIAL FULFILMENT
OF THE REQUIREMENTS FOR
THE DEGREE OF
D.CUR. IN THE FACULTY OF MEDICINE
AT THE
UNIVERSITY OF STELLENBOSCH

PROMOTER: PROF. E.B. WELMANN

DECEMBER 2000

DECLARATION

I, the undersigned, hereby declare that the work contained in this dissertation is my own original work and has not previously in its entirety or in part been submitted at any University for a degree.

SUMMARY

Guided by the researcher's clinical experience and through recent outreach research projects (Stellenberg, 1996 and 1997) the factors influencing the health status of two communities were identified through health screening. It was further identified that these problems affecting the health status of these communities were magnified through the poor accessibility, availability, and affordability of health services.

According to the researcher, despite the efforts of the Government and attempts to remedy the disparities of the past, the introduction of any such policy should be based on scientific evidence.

The researcher decided to investigate the factors influencing the health status of the Coloured people of the Western Cape. This population group is the largest in the Western Cape, being 60,8%. Its domination in this province determines the health status of the province. By acquiring knowledge about the factors influencing the health status of the Coloured population, it will be possible for the policy makers in health care to direct their emphasis on health care policies more appropriately. Currently differences in socio-economic and knowledge levels, along with existing inequalities in health service pose major challenges for the policy makers in health care. Therefore, knowledge about the health status, health practices and health beliefs of minority groups will improve the average health status of the general population.

It is against this background, that this research study was undertaken. Specific objectives were set for the study.

- To determine the health status of economically active Coloured people in an urban area as defined with specific reference to the indicators as identified by the researcher
- To determine the prevalence of factors influencing the health status of economically active Coloured people in an urban area as defined.
- To determine the relationship between the health status and the factors influencing the health status of economically active Coloured people in an urban area as defined.
- To determine an association between factors influencing the health status

of economically active Coloured people in an urban area as defined.

- To make recommendations to the health policy-makers concerning factors influencing the health status of the economically active Coloured people in an urban area as defined and possibly related ethnic groups.

These objectives were met through an in-depth research study of this population group in six identified suburbs. Factors influencing the health status of an individual as described in the literature were explored and described. The recommendations based on the findings confirmed that the health status of the Coloured population is influenced by the following factors:

- Socio-economic Level (education, financial income and occupation)
- Lifestyle of individuals (High Risk Behavioural Practice such as smoking, use of alcohol and illegal drugs, dietary intake, minimal exercise, stress management and leisure time)
- Ethno-cultural Beliefs: health and illness
- Religion, health and illness
- Environmental factors
- Health Services: accessibility and affordability of services

Recommendations based on the findings

- Emphasis on re-development and health education of all age groups.
- The introduction of social grants for those who are unable to support themselves and their families have become essential in order to improve their health status.
- The creation of jobs to improve the socio-economic circumstances of the populations.
- Current health services at primary health care level and environmental factors influencing the health status of the population require urgent attention.

OPSOMMING

Gelei deur die navorser se persoonlike kliniese ondervinding asook onlangse navorsingsprojekte oor uitreikingsaksies ten opsigte van gemeenskaps-gesondheid (Stellenberg, 1996 en 1997), is faktore wat 'n rol in die gesondheidstatus van gemeenskappe speel, geïdentifiseer. Daar is ook bevind dat faktore wat probleme rondom die gesondheidstatus van hierdie gemeenskappe vererger, elemente is soos toeganklikheid, beskikbaarheid en bekostigbaarheid van gesondheidsdienste.

Ten spyte van pogings van die regering om die ongelykhede van die verlede uit die weg te ruim behoort die regstelling daarvan volgens die navorser op wetenskaplike bewyse gegrond te word.

Die navorser het daarom besluit om die faktore wat gesondheidsorg van die Kleurlinggemeenskap in die Wes-Kaap beïnvloed, te ondersoek. Hierdie bevolkingsgroep is die grootste in die Wes-Kaap, naamlik 60,8%. Die oorheersing van die Kleurling in die provinsie bepaal grootliks die gesondheidstatus van die provinsie. Deur kennis in te win van faktore wat die gesondheidstatus van die Kleurlinggemeenskap beïnvloed, is dit moontlik vir besluitnemers in gesondheidsorg om dit beter te bestuur. Daarom sal kennis oor gesondheidsorg, gesondheidspraktyke en -gelowe van minderheidsgroepe die gesondheidstatus van die totale bevolking verbeter.

Dit is teen hierdie agtergrond wat die navorsing onderneem is. Spesifieke doelwitte vir die studie was om die volgende te bepaal:

- Die gesondheidstatus van die ekonomies aktiewe Kleurling-gemeenskap in 'n stedelike gebied soos gedefinieer met spesifieke verwysing na die indikatore soos geïdentifiseer deur die navorser
- Die prevalensie van faktore wat 'n invloed op die gesondheidstatus van die ekonomies aktiewe Kleurling-gemeenskap in 'n stedelike gebied soos gedefinieer
- Die verwantskap tussen die gesondheidstatus en die faktore wat 'n invloed uitoefen op die gesondheidstatus van die ekonomies aktiewe Kleurling-gemeenskap in 'n stedelike gebied soos gedefinieer
- Die moontlike assosiasie te bepaal tussen faktore wat die

gesondheidstatus beïnvloed van die ekonomies aktiewe Kleurling-gemeenskap in 'n stedelike gebied soos gedefinieer.

- Aanbevelings aan die gesondheidsowerheidsbeleidmakers oor bevindings wat 'n invloed uitoefen op die gesondheidstatus van die ekonomies aktiewe Kleurling-gemeenskap in 'n stedelike gebied soos gedefinieer, en moontlike verwant etniese groepe.

Die doel is bereik deur in-diepte navorsingsonderhoud met die Kleurling bevolkingsgroep in ses geïdentifiseerde gebiede. Faktore wat die gesondheidstatus van individue soos in die literatuur beskryf beïnvloed, is ondersoek en beskryf. Die aanbevelings is gebasseer op bevindings gedoen in die ondersoek van die gesondheidstatus van die Kleurling bevolking, en is deur die volgende faktore in die ondersoekgroep beïnvloed:

- Die sosio-ekonomiese vlak (opleiding, inkomste en beroep)
- Lewenstyl van respondente (hoë risiko faktore soos rook, die gebruik van alkohol, verdowingsmiddels, daaglikse dieët, oefening, hantering van spanning en vryetydsaktiwiteite).
- Etnies-kulturele gelowe: gesondheid en siekte
- Geloofsgesondheid en siekte
- Omgewingsfaktore
- Gesondheidsdienste: toeganklikheid en bekostigbaarheid van dienste

Aanbevelings wat op die navorsingsbevindings gebaseer is, is die volgende:

- Beklemtoning van die herontwikkeling van gesondheidsvoorligting vir alle ouderdomsgroepe.
- Die instel van 'n toelae vir individue wat nie in staat is om hulself en hulle gesinne te help nie, is noodsaaklik vir die verbetering van hulle gesondheidstatus.
- Die skep van meer werk om sosio-ekonomiese omstandighede in die bevolking te verbeter
- Huidige gesondheidsdienste op primêre gesondheidsorgvlak en omgewingsfaktore wat die gesondheidstatus van die gemeenskap beïnvloed, vereis dringend aandag.

ACKNOWLEDGEMENTS

I would like to acknowledge and express my sincere thanks to:

- Our Heavenly Father, all praise and thanks go to Him, who through His grace has inspired me to undertake and complete this research project.

- My promoter, Prof EB Welmann and Co-promoter, Prof CJ Groenewald for their continuous support, guidance, and positive critique of the research project.

- My late father and mother for their continuous support and motivation to persevere in my academic endeavours.

- Ruth, a dear friend and Aunt Sarah for their valuable support and being there for me throughout the period of the study.

- Mrs Rose-Maré Kreuser, a researcher and computer expert at the University of Stellenbosch, for her continuous support, guidance and dedication with reference to the statistical analysis and technical care of this research project.

- Mrs Dorothy Hartel, retired senior lecturer in English at the Bellville College of Education, for her dedication and support in editing the grammar and language style of the research project.

- Prof. J. Mouton, Director Social Sciences Research, University of Stellenbosch, for his guidance with reference to the Methodology of the study.

- Mrs J Barnes, statistician and methodologist at the University of Stellenbosch for her initial support in helping to determine the title and approach to this research project.

- Dr. T. van der Merwe for her enthusiasm and inspiration during the period of study.

- Registered Nurses, Ruth Pearce and Wilhemina Fielies for their assistance in the collection of the data.

- Democratic Nursing Organization of South Africa for the Dr PA Hendriks Nursing Bursary.

- University of Stellenbosch for the award of the Harry Crossley Scholarship for postgraduate studies.

- All the respondents who through their co-operation and value attached to the research study made it possible.

Ethelwynn Linda Stellenberg December 2000

TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

CHAPTER 1

SCIENTIFIC FOUNDATION OF THE STUDY

1.1 RATIONALE

According to Van Niekerk (1993) health care is a "... *moral command and responsibility*". All people of a society have an interest in a healthy populace. Landman (1993) argues that appropriate health care is a human right. A universal understanding exists that moral behaviour in the health arena should strive to allocate medical care justly, endow the patient with autonomy, maximize good effects and minimize bad effects (Kalekin-Fisherman, 1996).

In the early 19th- century an English philosopher, Henry Spencer, issued a stern injunction that preservation of health was not a moral issue but a consequence of economics. The rich were healthier than the poor. This is still very true (Lancet Editorial, 1996).

It now appears that health is becoming a moral responsibility. World wide less and less emphasis is placed on health as a priority. Tanzania spends $105.3 per person on defence but only $0.7 on health, Sudan $27 and $1.3 respectively (Lancet, 1996). South Africa is no different. In South Africa state expenditure on health is showing a gradual decline in the total budget. In 1991/92 the budget for health was 11%, in 1992/93 10.8%, in 1993/94=10.6%, in 1994/95=10.2% in 1995/96=10.4% (RSA Statistics in Brief 1997). "... *No amount of juggling by government departments has managed to obscure the overriding correlation between poverty and ill health*" (Lancet, 1996).

The researcher believes that providing appropriate health care is only attainable if preceded by scientific research. The purpose of this study therefore is to investigate factors influencing the health status of the Coloured people of the Western Cape in an urban setting. The researcher believes that several variables that have an influence on an individual's health status exist. Despite the commonality of variables, individual and ethnic differences exist in the influence of

these variables on individuals. The researcher is concerned about the current lack of knowledge about the factors influencing the health status of the Coloured population. The Coloured populace is presently the largest population group in the Western Cape. There is a conspicuous absence of systematic research on the factors influencing the health status of this group, and a corresponding lack of data on adaptive health strategies exists.

According to Kozier *et al.* (1995) factors that influence an individual's health status, health beliefs and health behaviour may be under conscious or unconscious control. People can choose healthy or unhealthy activities. On the other hand, there are factors over which the individual has little or no control such as sex, genetic makeup, and culture. Inequalities in health care among population groups existed within the apartheid era, the implications thereof still exist within many population groups. A study conducted within the Bloemfontein region shows that the Coloured and Black populations experience the most difficult problems with reference to distance between their residences and service health points in comparison to the White population. Distance from the point of residence to the health service may implicate the use and access to these services. Hirschowitz and de Castro (1998) in a national survey of health inequalities in South Africa, established that poor health and poverty are closely interlinked. The poor who use public facilities have less access to health-care, in comparison with the more affluent.

Coloured and Black groups are also at a disadvantage in terms of affordability and acceptability of health care. Consequently, professional health care is more accessible for some groups than for others. The inaccessibility of health care affects the utilization thereof and has an effect on the health care requirements that manifest themselves. In the same study it was found that many of the Black and Coloured respondents reported that they had to wait long hours before they were assisted, while White respondents reported that they were attended to quickly (Van Vuuren and De Klerk, 1996). In a recent outreach project (Stellenberg, 1996) carried out by the researcher among Coloured farm labourers, the health status of one hundred people was determined through health screening. The aim of the project was to determine the health status of the labourers. However, during the project, some factors influencing the health status of an individual were identified. Health screening included:

- A short health history
- Behavioural risk factors such as diet, smoking, drug, and alcohol abuse

- Use of leisure time, hobbies and sport
- Exercise and fitness
- Use of contraceptives
- Present health problems
- Physical examination
- Blood pressure, pulse, and respiration measurements
- If indicated, urine test, haemoglobin and haemoglucotest.

The findings included seventy-two adults, of whom 50% were referred to a doctor because of hypertension. Systolic pressure varied between 150-230mmHg and diastolic between 100-130mmHg. Untreated blood pressures of this nature could result in cerebral haemorrhage. This is exactly what happened to one participant who died of a cerebral haemorrhage a few months later.

Similar results were obtained in a second project (Stellenberg, 1997) in which the factors influencing the health status of the participants were determined. Three hundred and twenty (32%) members of a fishing community of 1000 people were screened. The sample included Coloured people of all social classes. The health status of the people was determined through screening for high-risk behaviours and underlying diseases not known to the individual. Ninety-eight adults of whom 40% were hypertensive were referred. In addition, differences in health beliefs and attitude towards health and illness were identified in both projects. The use of folk remedies was common. Ignorance about what health constitutes, how to promote a healthy lifestyle and how to contain a disease when identified, was obvious. In both projects, evidence obtained showed that health and illness were not priorities for the participants. Minimal value was attached to it. Therefore, the application of an aggressive programme in health education was essential. Extenuating circumstances encountered by both groups were accessibility, availability, and affordability of health services.

However, while ignorance exists about the health status of the people of the country, no amount of money will solve existing health problems in the country. A variety of beliefs and practices existing within communities such as religious, political, cultural beliefs and folklore medicine have an impact on the health status. The lack of knowledge about a healthy lifestyle and low educational levels magnify existing problems. At a time when major budget cuts are being experienced in the health department, the state can least afford problems as explained above. A high mortality and morbidity rate among the lower socio-economic classes will continue

to exist unless a more aggressive approach is applied to preventative and promotive health. Only the introduction of specific long-term interventions will alleviate problems of this nature. Specific programmes must not only aim at changing individual behaviours but also modify the social and physical environment including public policy in support of healthy lifestyles.

Rassool (1995) reports that differences in mortality and morbidity rates between ethno-cultural groups and the White population exist. It is essential therefore to develop openness to cultural diversity in relation to existing beliefs, values, and culture. World wide there is a resurgence, an awakening in investigating the health status of minority groups. Researchers in the field warn that policy makers the world over should guard against assumptions. Evidence in this regard has been obtained in various studies (Anderson, 1995; Bagley, 1995; Myers, 1995). Health policy should be based on scientific evidence and the specific problems, which are encountered in individual communities, should be addressed. Policies in health should be direct and appropriate.

An urgent investigation into the factors influencing the health status of the people is required. Differences in socio-economic and knowledge levels, coupled with existing inequalities in health, pose major challenges for the policy makers in health care. However, knowledge about the health status, health practices and health beliefs of minority groups will improve the average health status of the general population.

The restructuring of health services for maximum use by people living in the community needs urgent attention. The provision of better medical care and making that care more accessible to the people who need it, is required. This will not only affect the people but will influence the economy positively. The needs of the people will thus be addressed more appropriately. Through appropriate health education programmes the people will be empowered to take on responsibility for their own health. Ultimately the quality of life of the individual will be improved. Only then will a health service be cost effective.

The Coloured population is a minority group in South Africa, comprising 8.5% (3,508,000) of the total population. It has a growth rate of 1.94%. However, Coloured people are concentrated in the Western Cape where this group constitutes 60.8% (2,125,000) of the total population of the Western Cape, making it the most significant populace in the Western Cape (RSA Statistics in Brief,

1997).

For this study, an investigation into the prevalence of factors influencing the health status of the Coloured people of the Western Cape in an urban setting will be carried out. A study of this nature has not yet been undertaken.

The researcher postulates that the Western Cape government may save millions of rands if more knowledge and insight are obtained about this group despite its classification as a minority group in the country at large. Cognisance should be taken that this group is the largest populace in the Western Cape. It was decided that an investigation into the prevalence of factors influencing the health status of the economically active adults above the age of 21 years and younger or equal to 50 years were to be investigated in a particular urban area. According to the 1996 census, this group accounts for 63004 of the total population of the Coloured people. The group contributes significantly towards the economy of the Western Cape. By determining the health status of individuals of a population group, it will reflect the health status of such a group. The health status refers to the health of an individual at a given time.

1.2 PROBLEM STATEMENT

In the light of the above, the researcher, supported by her clinical experience, research projects, and the literature, poses the following questions as indication for the research:

- What is the health status of the Coloured people of an urban area in the Western Cape?
- What is the prevalence of factors influencing the health status of the Coloured people of an urban area in the Western Cape?

1.3 GOAL OF THE STUDY

To investigate the prevalence of the factors influencing the health status of the Coloured people of the Western Cape in an urban setting.

1.4 OBJECTIVES

Objectives are specific measurable explanations of aims and will enable the researcher to decide if the problem has been solved. The following objectives are set for the research study: (Also refer to the limitations of the study)

1.4.1 To determine the health status of economically active Coloured people in an urban area as defined with specific reference to the indicators as identified by the researcher

1.4.2 To determine the prevalence of factors influencing the health status of economically active Coloured people in an urban area as defined.

1.4.3 To determine the relationship between the health status and the factors influencing the health status of economically active Coloured people in an urban area as defined.

1.4.4 To determine an association between factors influencing the health status of economically active Coloured people in an urban area as defined.

1.4.5. To make recommendations to the health policy-makers concerning factors influencing the health status of the economically active Coloured people in an urban area as defined and possibly related ethnic groups.

The study will not determine causality, but associations between factors influencing the health status of individuals.

1.5 RESEARCH MODEL

The researcher believes that the scientific research model as described by Mouton and Marais (1989, 1992) is congruent with that of the study. The scientific research model that will subsequently be followed in this research project will be that of Mouton and Marais (1989, 1992). It can be described as a systems theoretical model differentiating between three subsystems that integrate with each other and the research domain as defined in a specific discipline. This model represents an integrated approach to human sciences research. The following subsections are defined: the intellectual climate of a specific discipline, the market of intellectual resources within each discipline and the research process.

The **intellectual climate** refers to metatheoretical assumptions, doctrines and values about man and his history, culture, economy and society. These

assumptions and doctrines are not verifiable or subjected to verification. These are commitments underlying variable statements.

The **market of intellectual resources** includes the collection of theoretical and methodological beliefs.

The **theoretical beliefs** can be described as statements which describe the "*what*" and "*why*" of human phenomena and actions. These include all statements that form part of the hypotheses, theories and models.

The **methodological beliefs** can be described as a collection of beliefs that states the nature and structure of science and scientific research.

The **research process:** The attention of the researcher now shifts to a typical research project. The researcher selectively internalises certain aspects from the intellectual climate and beliefs emanating from the market of intellectual resources, which enables him/her to achieve a meaningful interaction with the research project and the particular research domain.

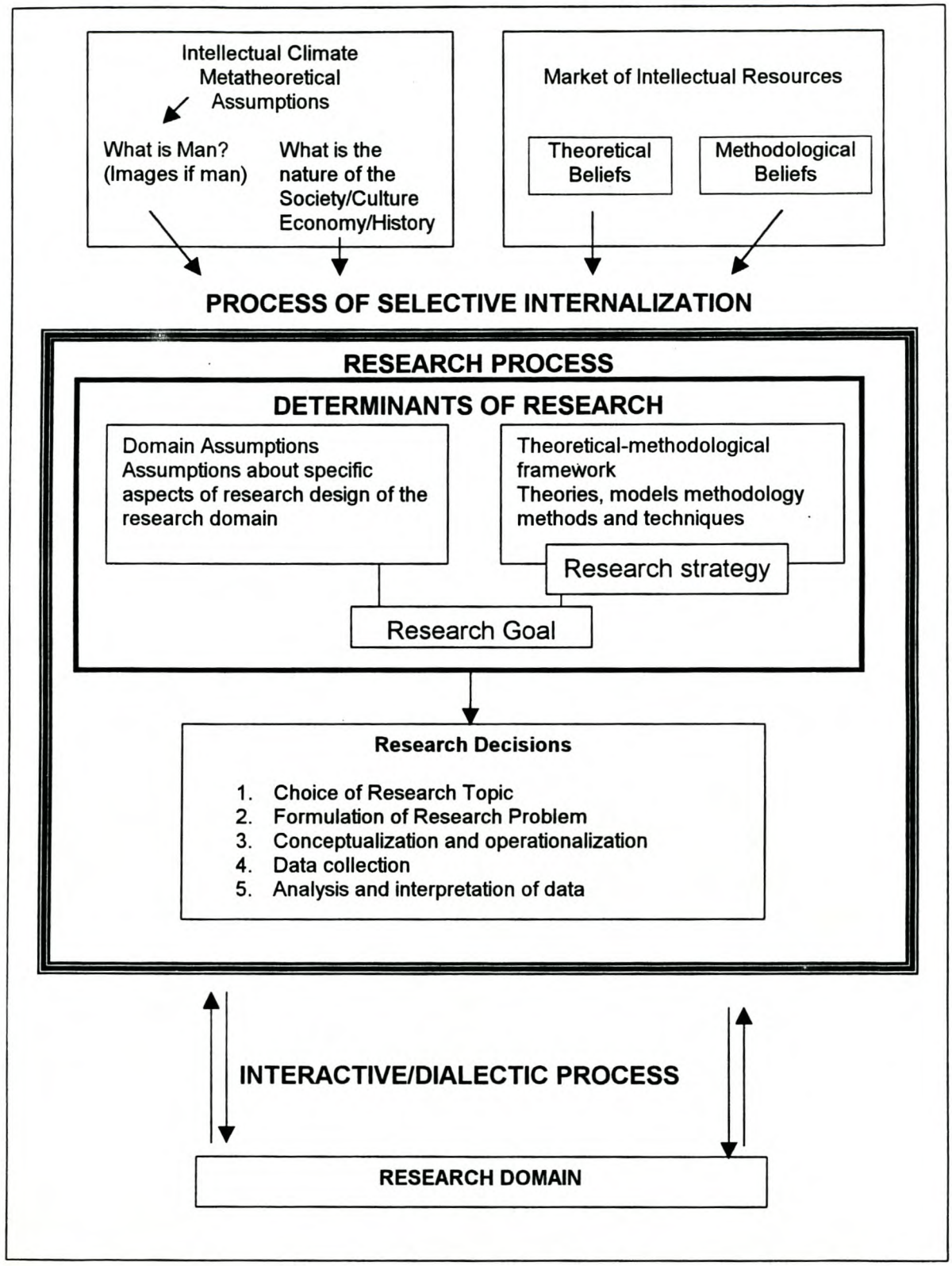
The task or problem-orientated beliefs: These are described as the determinants of the research decisions. The content of the problem-orientated beliefs, that is the determinants of the research decisions, arises from the interaction between the researcher with her conceptual framework and the research domain i.e. her perception of the research. The research strategy and the research goal are developed out of the proposed research project and the selected beliefs of the domain phenomena.

The research process consists of five steps:

- the choice of a research topic
- the formulation of the research problem
- conceptualisation and operationalisation
- data collection
- analysis and interpretation of data

(Mouton and Marais, 1989; 1992).

FIGURE 1.1: RESEARCH MODEL OF MOUTON AND MARAIS



(Mouton and Marais, 1989:23; 1992:23)

1.6 PARADIGMATIC PERSPECTIVE

A characteristic of the human sciences research is that the research in the various disciplines is characterized by a number of paradigms or research traditions, whilst in the natural sciences it appears that a specific paradigm dominates (Mouton and Marais, 1989).

The study is characterized by metatheoretical assumptions, doctrines and values about man and his culture, economy and society. It also includes a collection of theoretical and methodological beliefs. The theoretical beliefs include all statements that form part of the hypotheses, theories, and models. The methodological beliefs can be described as a collection of beliefs that state the nature and structure of science and scientific research. The study then follows the research process within which the researcher is enabled to achieve a meaningful interaction with the research project and the particular research domain. According to the researcher, a human or individual is multi-dimensional and is composed of the following components as described by Virginia Henderson: biological (physical), psychological, sociological and spiritual components (George, 1990). Betty Neuman substantiates this further when she describes the human or individual as the "*total person*" being multidimensional (George, 1990). According to the researcher while the human being is holistic, components forming the "*whole*" are always in interaction in an attempt to cause a balance or equilibrium within the person. The researcher refers to this balance as a state of well-being. This is supported by the World Health Organization which describes health as a *"... state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity*" (World Health Organization, 1947). Validated by Orem *"... the physical, psychological, interpersonal and social aspects of health are inseparable in the individual*" (George, 1990).

However, cognisance should be taken that an individual's health is determined by the continuous interaction between his/her internal and external forces that result in the optimal use of the necessary resources that serve to minimize man's vulnerabilities (Abdellah in George, 1990).

Health status is the state of health of a person at a given time (Kozier *et al.*, 1995). However, according to Twaddle in Jaco (1979) to understand health as a social status it is important to define the bio-physical parameters of health status. Man is an organism that has basic needs. These needs must be met before he or she can

function in any supra-organic sense such as a psychological, social, or cultural being. Health beliefs are concepts about health that an individual believes to be true. Many of these beliefs may not be founded on fact but may be believed because of cultural or religious influence (Kozier *et al.*, 1995; Spector, 1996). Health behaviour, however, is the action people take to understand their health state, maintain an optimal state of health, and prevent illness and to reach their maximum physical potential for example regular exercise and eating wisely (Kozier *et al.*, 1995; Bagley *et al.* 1995). Kozier *et al.* illustrates how race, ethnicity and cultural attitudes and practices are among the variables that influence health behaviours including adaptive health behaviours. While many strive for optimal health, Myers *et al.* (1995) shows how five behavioural risk factors namely, cigarette smoking, dietary intake, being overweight, limited exercise, and alcohol consumption relate to chronic diseases. Therefore, many factors exist that may influence an individual's health status, health beliefs and health behaviour. The researcher believes that these factors may have an adverse or a helpful or positive effect on the individual. Factors identified in the literature that influence an individual's health status, health beliefs and health behaviour include the following:

- lifestyle
- spiritual and religious beliefs
- socio-economic level
- educational level
- occupation
- environment
- family and ethno-cultural beliefs
- social support networks

(Bekker *et al.*, 1996; Cockerham, 1982; Kozier *et al.*, 1995; Rassool, 1995; Ratsaka and Hirschowitz, 1995; Turk and Kerns, 1985).

The purpose of this study is to investigate the prevalence of factors influencing the health status of the economically active Coloured people of the Western Cape in an urban setting, above the age of 21 years and less than or equal to 50 years of age. Substantiated and validated through the literature, the researcher believes that several variables that have an influence on an individual's health status exist. The intention of this study is to determine whether factors identified in the literature could be associated with the health status of this population group.

1.6.1 Metatheoretical statements

According to Polit and Hungler (1991), research studies are built on a series of assumptions. The following serve as metatheoretical statements forming a point of departure for this study.

Belief: a principle accepted as true or real without the proof (McLeod WT, 1982).

Class: a division or a collection of people sharing a common characteristic such as sharing a similar social and economic position (McLeod WT, 1982).

Culture: the sum of beliefs, practices, habits, customs, rituals, norms, transmitted from generation to generation (Spector, 1996).

Disease: *" ... a condition of the body, or of some part or organ of the body, in which its functions are disturbed or deranged ..."* (Tuckett, 1978).

Employee a person who is hired to work for another for remuneration (McLeod WT, 1982).

Employment the act of employing or being employed (McLeod WT, 1982).

Environment: according to Neuman in George (1990) the environment is described *"... as those internal and external forces that surround humans at a given point in time"*.

Ethnic: pertaining to a social group within a cultural and social system (Spector, 1996).

Ethnicity: the condition of belonging to a particular ethnic group (Spector, 1996).

Family: a family is a group of people who are emotionally involved with each other (Friedmann, 1992).

Folk medicine: is found in old fashioned remedies and household medicines (Spector, 1996).

Health: "*Health is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity*" (World Health Organization, 1947).

Health behaviour: the actions people take to understand their health state, maintain an optimal state of health, prevent illness and injury, and reach their maximum physical and mental potential (Kozier *et al.*, 1995).

Health practices: see health behaviour

Health status: state of health of a person at a given time (Kozier *et al.*, 1995).

Holism: a theory that the universe and especially living nature are correctly seen in terms of interacting wholes that are more than the sum of the individual parts (George, 1990).

Illness: Illness can be interpreted and explained in terms of personal experience and expectations (Spector, 1996).

Lifestyle: the particular attitudes, habits, or behaviour associated with a group or an individual (McLeod WT, 1982).

Longevity: life expectancy (Kozier *et al.*,1995).

Magicoreligious folk medicine: use of charms, holy words, and holy actions to prevent and cure illness (Spector, 1996).

Morbidity: refers to illness and measures of people's sense of well-being or self -rated health status (Kozier *et al.*, 1995).

Mortality: statistics on death rate (Kozier *et al.*, 1995).

Nursing: "*The unique function of the nurse is to assist the individual, sick or well in the performance of those activities contributing to*

health or its recovery (or to peaceful death) that he would perform unaided if he had the necessary strength, will or knowledge. And to do this in such a way as to help him gain independence as rapidly as possible" (Henderson, 1977).

Occupation: a person's regular work or profession; job (McLeod WT, 1982).

Person: is a multi-dimensional being with the following components: biological, psychological, sociological and spiritual who is constantly in interaction with the environment (George, 1990).

Religion: is an organized system of worship, that has central beliefs, rituals, and practices usually related to death, marriage and salvation (Kozier *et al.*, 1995).

Social class: see class

Status: a social or professional position (McLeod WT, 1982).

Social support networks: are closely related to an individual's internal factors of self-concept, cognition and psychological make-up, these influence the person's motivation and ability to develop support networks, having a support network that is family or friends, helps an individual to avoid illness (Kozier *et al.*, 1995).

Socio-economic status: see class

Spiritual beliefs: is a belief in or relationship with some higher power or creative force, divine being "*God*", "*Creator*", "*Allah*" (Kozier *et al.*, 1995).

Stress: mental, emotional or physical strain or tension (McLeod WT, 1982).

Unemployment: without remunerative work; without work (McLeod WT, 1982).

Values: the moral principles and or accepted standards of a person or

a group (McLeod WT, 1982).

Wellness: is described by Neuman in George (1990) as *"... a dynamic composite of physical, psychological, socio-cultural, developmental and spiritual balance ...".*

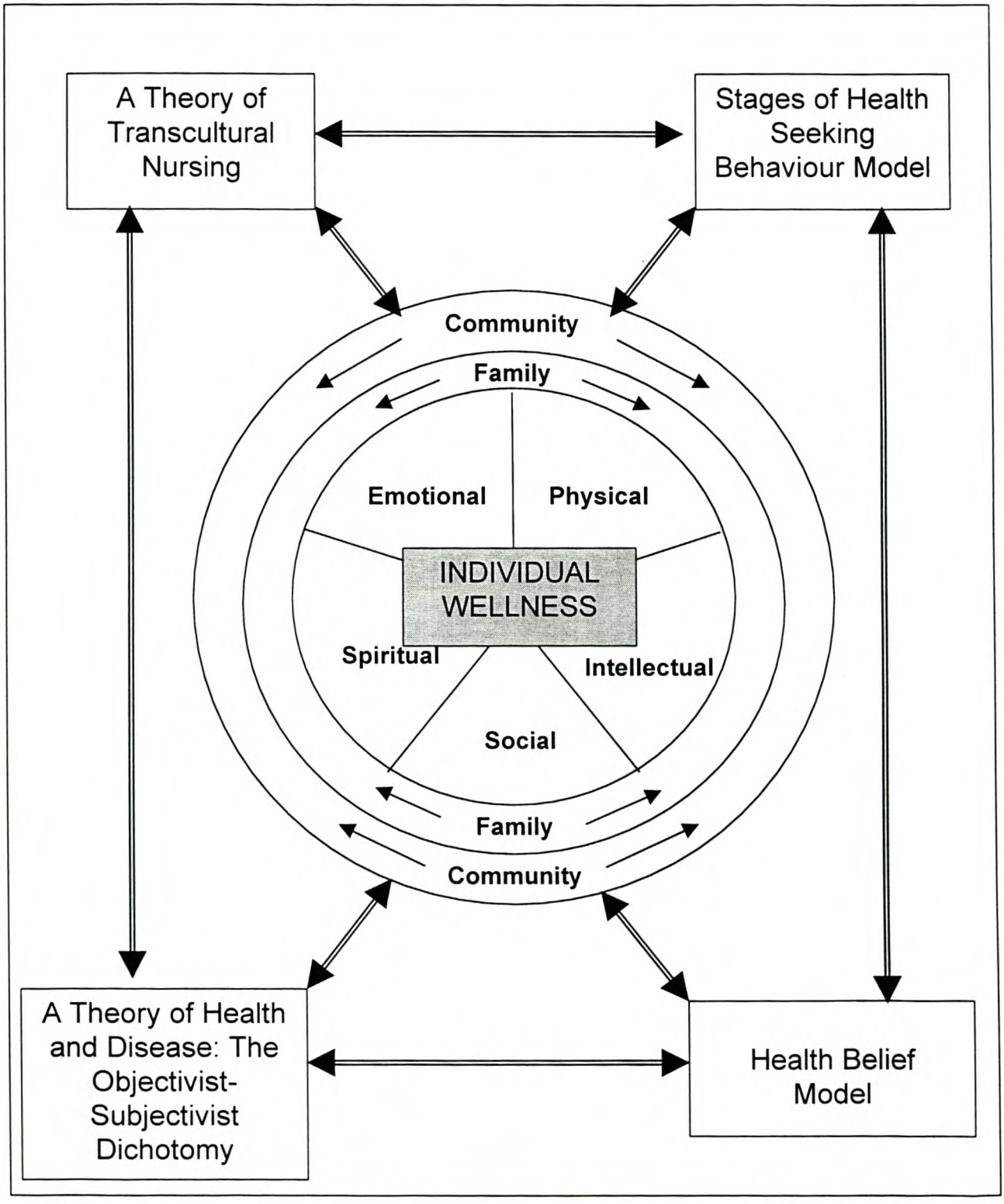
1.6.2 Theoretical approaches

Theories and models based on health, sickness and wellness will be used as a conceptual framework for this study. The following will form the conceptual framework:

- Igun UA: Stages in Health Seeking: A descriptive Model
- Leininger M (George 1990): A theory of transcultural nursing
- Rosenstock *et al.* (1988): Health Belief Model
- Sade J (1995): A theory of health and disease: The Objectivist-Subjectivist Dichotomy.
- Travis J (Travis and Ryan, 1988) : Wellness Model

According to Neuman in George (1990) wellness is described as *" ... a dynamic composite of physical, psychological, sociocultural, developmental and spiritual balance ... "*. This is supported by Anspaugh *et al.* (1991) who indicates that wellness consists of five dimensions as shown in figure 1.2, that are constantly in interaction to obtain optimal health. Figure 1.2 shows that the individual forms part of a family and community. The models and theories that form part of the conceptual framework are constantly in interaction with the health status of an individual. These models and theories are interrelated as shown in figure 1.2.

FIGURE 1.2: AN ILLUSTRATION SHOWING A CONCEPTUAL FRAMEWORK FOR THIS STUDY: THE FACTORS INFLUENCING THE HEALTH STATUS OF AN INDIVIDUAL (ILLUSTRATION BY RESEARCHER)



1.6.3 Methodological Beliefs

Methodological beliefs can be described as a collection of beliefs, which states the nature, and structure of science and scientific research. The research project will be conducted in a descriptive, explorative manner, based on the research model of Mouton and Marais (1989; 1992) and the theory-generating design of Dickoff *et al.* (1968).

1.7 OPERATIONAL DEFINITIONS

The following terminology utilized in the study is defined or clarified to ensure consistent interpretations.

Accessibility: easily to approach, use or enter (McLeod WT, 1982).

Affordability: to be able to do something without incurring any financial difficulties (McLeod WT, 1982).

Air pollution: man-made contamination of the atmosphere, beyond that which is natural (Air Pollution Primar, National Tuberculosis and Respiratory Disease Association).

Availability: obtainable or accessible (McLeod WT, 1982).

Blood Pressure: blood pressure is the force per unit area exerted on the wall of a blood vessel by its contained blood (Marieb, 1998).

Blood Pressure Levels: systolic: optimal <120mmHg and normal <130mmHg; diastolic: optimal <80mmHg and normal <85mmHg (Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure, 1997).

Casual blood glucose levels: blood glucose determined at any time of day without regard to time since the last meal (American Diabetes Association,1998)

Cholesterol: Unsaturated fat, secondary alcohol structure related to steroid hormones. Found in animal tissue in an unbound form, also as esthers in various fatty acids (Brink en medewerkers, 1979).

Education: the act or process of acquiring knowledge or training (McLeod WT, 1982).

Formal settlement: described as a settlement of official nature (McLeod WT, 1982).

Haemoglobin: is made up of the protein globin bound to the red haem pigment. A haemoglobin molecule transports four molecules of oxygen (Marieb, 1998).

Haemoglobin normal levels: Males 13-18g/100ml of blood; Females12-16g/100ml of blood (Marieb, 1998).

Haemoglucotest: test to determine the glucose levels of the blood. Normal blood glucose accidental values 4-7mmol/L (Boehringer Mannheim - Diagnostics).

Informal settlement: described as a settlement not of a formal or official nature (McLeod WT, 1982).

Lipotrend cholesterol levels: less than 5,0mmol/ L - Desirable
5,0 - 6,5mmol/ L - Moderate Risk
6,5 - 7,8mmol/ L - High Risk
More than 7,8mmol/ L - Very High Risk
(South African Heart Foundation).

Patient Education: can be described as teaching an individual or a group of patients with a specific need (Redman, 1976).

Pollutant: a substance that pollutes especially a chemical produced as a waste product of an industrial process (McLeod WT, 1982).

Pulse: is the alternating expansion and recoil of elastic arteries during each cardiac cycle creating a pressure wave transmitted through the arterial tree with each heart beat. Normal rate: 70-80 beats in an adult (Marieb, 1998).

Respiration: consists of four processes, pulmonary ventilation, that is the movement of air in and out of the lungs; external respiration the actual gas exchange between the blood and air of the alveoli; transport of gases between the lungs and tissue cells; internal respiration is the exchange of gases between the cells and the blood Normal rate: 16-20 breaths per minute in an adult (Marieb, 1998).

Urinalysis: a urine test for abnormalities (Boehringer Mannheim - Diagnostics).

1.8 RESEARCH METHODOLOGY

1.8.1 Research approach

A descriptive non-experimental approach will be used to investigate and describe the prevalence of factors influencing the health status of the Coloured people of the Western Cape in an urban setting.

1.8.2 The Research Design

A cross sectional survey will be conducted in the lower- lying areas of the Cape Metropole to determine the prevalence of factors influencing the health status of the Coloured people as defined.

1.8.3 Hypothesis

The researcher believes that self-perpetuating problems exist at present between

communities and families who are ignorant about a healthy lifestyle. This impinges on the next generation as behavioural health risks practised in one generation continue into the next generation.

A hypothesis is *"... the formal statement of the expected relationship(s) between two or more variables in a specified population*" (Burns and Grove, 1993).

The hypothesis for this study is based on associations between the health status and the various factors influencing the health status of the respondents of the target population as decided upon for this study, namely the economically active Coloured people above the age of 21 years and less than or equal to 50years of age, living in an urban setting in the lower –lying areas of the Cape Metropole in the Western Cape.

According to the research methodologist, Prof J Mouton (U.S., 1998) determining correlations is more accurate than determining associations. In the final analysis, only associations will be tested for the purpose of this study. The chi-square statistical test will be applied to determine associations of statistical significance between data.

1. HYPOTHESIS: (H_o)

There is no association between the health status of the Coloured people of an urban area in the Western Cape and other factors such as biographical factors.

HYPOTHESIS (H_1)

There is an association between the health status of the Coloured people of an urban area in the Western Cape and other factors such as biographical factors.

2. NUL HYPOTHESIS (H_o)

There is no association between the health status and the socio-economic status of the Coloured people of an urban area in the Western Cape.

HYPOTHESIS (H_1)

There is an association between the health status and the socio-economic status of the Coloured people of an urban area in the Western Cape.

3. NUL HYPOTHESIS (Ho)

There is no association between the health status and health beliefs of the Coloured people of an urban area in the Western Cape.

HYPOTHESIS (H_1)

There is an association between the health status and health beliefs of the Coloured people of an urban area in the Western Cape

4. NUL HYPOTHESIS (Ho)

There is no association between the health status and ethno-cultural beliefs of the Coloured people of an urban area in the Western Cape.

HYPOTHESIS (H_1)

There is an association between the health status and ethno-cultural beliefs of the Coloured people of an urban area in the Western Cape.

5. NUL HYPOTHESIS (Ho)

There is no association between the health status and religious beliefs of the Coloured people of an urban area in the Western Cape.

HYPOTHESIS (H_1)

There is an association between the health status and religious beliefs of the Coloured people of an urban area in the Western Cape

6. NUL HYPOTHESIS : (Ho)

There is no association between the various factors influencing the health status of the Coloured people of an urban area in the Western Cape

HYPOTHESIS (H_1)

There is an association between the various factors influencing the health status of the Coloured people of an urban area in the Western Cape

7. NUL HYPOTHESIS (Ho)

There is no association between the health status of the Coloured people of an

urban area in the Western Cape and their lifestyles

HYPOTHESIS (H_1)

There is an association between the health status of the Coloured people of an urban area in the Western Cape and their lifestyles

1.8.4 Population and sampling

After an in-depth discussion with the statistician and research methodologist, it was decided to conduct a survey as the data collection technique. A purposeful sample of 300 participants will be drawn from predominantly Coloured residential suburbs that are well representative of all social classes. Due to time and financial constraints, at least 50 participants will be drawn from each suburb. Statistically this is the least acceptable number of respondents from a residential area for a sample.

According to Krejcie and Morgen (1970) a sample of 384 (0,04%) participants is required for a population of one million in any scientific study. In this study a sample of 353 (0,6%) were drawn from a population of 63004.

The design of the sample maximises the chance that all the social classes are equally represented. In the final analysis other statistical procedures such as weighting will be applied to correct the under-representation of a subgroup. According to Prof J Mouton, (U.S., 1998) it is not possible to distinguish the class structure of a suburb before the commencement of the study. This is only possible after the research has been completed. To widen the probability of including participants of all socio-economic levels, the following suburbs of the Cape Metropole have been decided upon for this study:

- Belhar
- Bellville South
- Elsies River
- Kraaifontein
- Kuilsriver
- Ravensmead

The areas selected have been categorized with the assistance of town planners of the municipalities concerned into formal and informal housing.

a) Formal Housing

- Middle to upper income group. It is not possible to categorize this group into only upper or middle-income groups as people of both groups are found living in this demarcated geographical area.

- Lower income group

b) Informal Housing

According to the town planners there are no informal housing settlements found in Bellville South, Belhar and Ravensmead. To enable the researcher to find a representative number of participants in all three categories, an additional number of respondents from informal housing settlements found in the suburbs Elsiesriver, Kraaifontein and Kuilsriver will be included in the study.

1.8.5. Limitations of the Study

The researcher decided that a more homogeneous sample had to be selected for the study. According to the literature, there are factors that may influence the health status of an individual over which he/she has no control for example climate (Kozier, 1995). A limitation of this study is therefore that the sample drawn will not represent the Coloured people per se, as the sample is only drawn from the lower-lying geographical area of the Cape Metropole. Therefore, although "Coloured population" will be used this limitation exists.

The rationale for selecting a sample only from the areas of the low-lying geographical area is:

- To obtain a more homogeneous sample
- The geographical shape of the low lying areas is that of a flat basin surrounded by mountains, resulting in a difference in the climate of the these areas and the higher lying areas where the air is cleaner and the rainfall much higher (Linno, 1999).
- The Cape Town brown haze occurs mostly during the winter months, from April to September due to strong temperature inversions and windless conditions during these months. Consequently, this leads to a build-up of

pollutants emitted into the atmosphere. The haze extends over most of the low-lying area, it is most intense in the morning and then lifts and disperses. The haze has a strong degrading effect on visibility. In urban areas particles less than 2.5 microns in size are the single largest cause of visibility impairment. These are also the most harmful to human health (Wicking-Baird *et al.*, 1997).

- The suburban areas selected are also dominated and surrounded by industries that contribute to the air pollution.
- The urban setting of the northern suburbs is divided into a lower-lying and higher lying areas.
- Areas that have not been included in the study are those areas lying outside of the lower-lying areas.
- Coloured people of rural areas are excluded from the study.

Further limitations that influenced the study were the following:

- The time range that was determined for the completion of the study
- Financial constraints
- The pilot study indicated that many Coloured people older than 50 years had taken early retirement and were therefore excluded from the study.
- Participants 21 years and younger were potentially still at college or university. These participants are still dependent on their parents for their welfare and were therefore excluded from the study.
- The study is restricted to the economically active adults above 21years and younger or equal to 50 years of age.
- Crime and animals threatened the safety of the researcher and assistants.
- Interviews conducted were not always under the ideal clinical circumstances, at times literally in the field, in over-crowed homes, noisy environments and under verandas.
- The middle and upper socio-economic homes were clustered together as one unit because these homes could not be accurately defined as separate clusters.
- Despite the pilot study, biases could affect the study as two field workers assisted the researcher.
- The use of the cross-sectional survey limits the research to a well-defined population
- "Chicken or egg" dilemma is common to cross-sectional data such as "was the consumption of alcohol caused by unemployment or did unemployment cause the consumption of alcohol".

- Cross-sectional surveys consider prevalence rather than incident cases
- Cross-sectional surveys can be used to describe characteristics of individuals with disease and to formulate hypotheses but not to test them.
- Analysis are made on an expost-facto explanation or proof, it is not a causality study.

1.8.6 Criteria for selection

The following selective criteria were set:

- Participants who identify themselves as Coloured
- Participants who give consent to participate in the research study
- Participants residing in the suburbs on the lower-lying areas as defined.
- Participants who are economically active, including workers (employers and employees) in both the formal and informal sectors, and persons who are unemployed as defined by the Central Statistics Department.
- Participants older than 21 years but younger than or equal to 50 years of age.
- The house type as categorized (middle to upper, lower and informal housing).
- The sample should include males and females.

1.8.7 Data collection

Data will be collected by means of a structured questionnaire in a structured interview with individual participants. Data will be collected within a period of one year. The researcher intends to collect data personally with the help of three trained field workers who are registered nurses. The researcher will carry out training of the research field workers.

1.8.8 Instrumentation

A structured interview will be conducted with the use of a structured questionnaire.

1.8.9 Analysis and interpretation

The theory-generating design constructed by Dickoff *et al.* (1968) on four different levels will be used namely:

- factor-isolating theory
- factor-relating theory
- situation-relating theory
- situation-producing theory

Reasoning strategies of induction, deduction, hypothetico-deduction, analysing and interpretation will be implemented to factor isolate, factor relate, situation relate and situation produce the concepts in health and illness (Mouton and Marais, 1992; Seaman, 1987). Data will be analysed with the use of statistical programmes on the computer. A statistician will be consulted.

1.9 STUDY LAYOUT

TITLE: **An Investigation into the Factors Influencing the Health Status of the Coloured People of the Western Cape in an Urban Setting**

Chapter 1: Scientific Foundation of the Study
The first chapter describes the background, the focus and rationale of the study. A brief outline of the goals, objectives, research model, paradigmatic perspective, conceptual framework, operational definitions and methodology is described.

Chapters 2 and 3: Literature Study

Chapter 2 concentrates on a literature study directed at health, health status, health behaviours, illness and wellness including related models and theories.

Chapter 3 is directed at factors influencing the health status of an individual and communities.

Chapter 4: An in-depth description of the research methodology including the research design, sampling and collection of data strategies is given.

Chapter 5: Results of the research are discussed, interpreted, and analysed in this

chapter.

Chapter 6: The important deductions and inferences are described in this chapter. Recommendations based on the findings of the research are included.

1.10 CONCLUSION

In this chapter the researcher uncovers the depth of the research study to be undertaken. The scientific foundation that includes the background, the focus and rationale of the study is clarified. A brief outline of the objectives, research model, paradigmatic perspective, conceptual framework, operational definitions and methodology is described.

CHAPTER 2

HEALTH, WELLNESS AND ILLNESS: A LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter the researcher presents a literature study directed at health, health status, health beliefs and health behaviours, wellness and well-being, illness and disease. Related models and theories that bring about more clarity and understanding about health and its related concepts are also described.

2.2 HEALTH

Health and illness do not exist in isolation but within a specific socio-political, cultural and interactive context. Many think they know what health and illness are, but *"... the matter is not so simple as it appears..."* (Jones, 1991). According to Kozier *"... health is a changing, evolving concept..."*. For many centuries, disease was the yardstick of health (Kozier *et al.*, 1995).

As men waxed wiser in their understanding of nature, so did their care for the sick grow in complexity and sophistication. The rise of ancient civilizations added new dimensions in the search for health (Rogers, 1979).

A central concept about health common to both Greek metaphysical and medical thought is that there is a balance between opposing powers. Lidz (1995) explains that it was in the early fifth century B.C. that a physician, Alcmaeon of Kroton likewise made polarity central to his theory about health. In this theory, he claims that most things pertaining to human affairs come in opposing pairs of powers. The health of a person depends on a dynamic equilibrium between opposing powers. Disease results from the disruption of such an equilibrium. Health exists when the qualities or powers are blended in proper proportion (Lidz, 1995).

The ancient Africans viewed health as a state that prevailed when an individual was in harmony with him or herself, with those around him or her and with nature. Illness occurred when a state of disharmony existed within the self (Dolan *et al.*, 1983).

In Chinese culture, health was considered to be a state of harmony or equilibrium within an individual and in the universe. This harmonious state was brought about by the normal flow of energy that was regulated by two opposing forces in nature, the *yang,* and the *yin.* The yang and yin theory brought about some scientific basis for disease. The yang was the male principle namely the positive, desirable, active, fiery, and full of life force. In contrast, the yin or female principle was the negative, cold, weak, dark, and lifeless force. An imbalance between the forces indicated that disease was present in the individual, while harmony indicated the person was healthy (Dolan *et al.*, 1983).

Hippocrates, the *Father of Medicine* stressed that "*Health depends upon a state of equilibrium among the various internal factors which govern the operations of the body and the mind; this equilibrium in turn is reached only when man lives in harmony with his external environment*" (Dolan *et al.*, 1983).

It was not until the early nineteenth century that nursing theorists started to evolve. The first nursing theorist, Florence Nightingale, (1820 - 1910) the *Mother of Modern Nursing* defined health as "*... not only being well, but to be able to use well every power we have*" (Dolan *et al.*, 1983). She argued that health is maintained through prevention of disease via environmental health factors. "*Disease is a reparative process nature institutes because of some want of attention*" (Kozier *et al.*, 1995). Nightingale placed more emphasis on the physical dimension of the individual. It was her greatest concern that the physical environment was satisfactory in order to prevent disease (Torres in George, 1990).

A century later Virginia Henderson introduced her theory on the basic needs of an individual. She describes *health* as an individual's ability to perform 14 components of nursing care unaided. Examples of these components are to breathe normally, eat, and drink adequately. Henderson emphasises that health is a quality of life basic to human functioning. It requires independence and interdependence. Quality of life rather than life itself allows you to function effectively and to reach the highest potential level of satisfaction in life. Individuals will achieve and maintain health if they have the necessary strength, will and knowledge. Physical aspects of the individual are emphasised, and very little reference is made to the psychological

dimension (Furukawa and Howe in George, 1990; Kozier *et al.*, 1995).

In 1947, the World Health Organisation (WHO) introduced a broad definition of health namely, *"Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, 1947).* The definition caused much criticism, despite this, it addresses a holistic view on health.

The following factors are addressed:

- It reflects concern for the individual as a total person functioning physically, psychologically, and socially. It is an individual's mental process that will determine a relationship with the individual's physical and social surroundings, attitudes about life and interaction with others.
- it places health in the context of the environment. People's lives and therefore their health, are affected by everything they interact with, not only environmental influences such as climate, the availability of nutritious food, shelter but also other people, including family, friends, co-workers.
- it equates health with productive and creative living. It focuses on the living state rather than on categories of disease that may cause illness or death.

Some people view the word *"complete"* in the definition as a weakness. To illustrate this weakness consider a person with a mild chronic problem such as hay fever. This person may be seen as being unhealthy (Kozier *et al.*, 1995).

Blackburn (1991) indicates that concepts such as "*well-being*" and "*adjustment to the environment*" as used in a definition of health by the Royal College of General Practitioners, "*... a satisfactory adjustment of the individual to the environment"* is difficult to measure in a meaningful statistical manner.

The concept of health poses more complexity when viewed from a lay person's perspective. Studies conducted by Blaxter (1997) shows that even in developed countries laypersons have their own idea about what health really is. In this particular study, respondents defined their health as good despite the presence of severe disability or chronic illness. Examples of a study conducted among middle-aged. Scottish women described a healthy person as follows; *"...I suppose he would be healthy, because he's never been ill - an ulcer, cracked ribs, things like that. But never a cold or flu". "... He got part of his lung cut out. But he was aye healthy enough*".

Rogers (1991) identified in two studies eight accounts of how lay people account for health and illness. Rogers describes only four of these accounts namely:

- The "*God's power*" account, within which health is a product of "*right living*", spiritual well-being and God's care.
- The "willpower" account, which sees the individual as pre-eminently in control, and stresses the moral responsibility of the individual to use their "*will*" to maintain good health
- The "*inequality of access*" account, convinced of the benefits of modern medicine, but concerned about the unfair allocation of those benefits and their lack of availability to those who need them most.
- The "*cultural critique*" of medicine account, based upon a "dominance" sociological worldview of exploitation and oppression and a post-modernist analysis of knowledge as socially constituted and ideologically mediated.

Many definitions about health have evolved through various disciplines including that of laypersons. It has become clear that no single definition fully conveys what health really is (Spector, 1996). According to Kozier *et al.,* (1995) there is no consensus about any definition of health. However, despite the critiques as discussed above, the definition of health as defined by the World Health Organization has become the more universally acceptable definition.

2.3 HEALTH STATUS, HEALTH BELIEFS, AND HEALTH BEHAVIOURS

Kozier *et al.* (1995) defines health status as the state of health of an individual at a given time. The health status of an individual may also refer to specifics such as pulse rate or temperature. According to Twaddle in (Jaco, 1979) to understand health as a social status it is important to define the biophysical parameters of health status. Man is an organism that has basic needs. These needs must be met before he or she can function in any supra-organic sense such as a psychological, social or cultural being.

Specific health indicators such as death rates, life expectancy and mortality rates often determine the health status of a country. The most widely used is death rate, used when comparing the health status within a country or between countries, the infant mortality rate, that is the number of live-born babies dying within the first year of life per 1000 births is used. To illustrate this the United States infant mortality

remains almost double to that of Sweden, which is the lowest in the world. It is 50% higher than Japan, Switzerland, and the Netherlands (Brown, 1989). The Netherlands and Japan are considered among the healthiest countries in the world. Life expectancies being 81 years for Japanese women, 80 years for Dutch women, 76 years for Japanese men and 74 years for Dutch men.

According to Yach *et al.* (1987) South Africa's health status compares poorly with countries of the same GNP per capita in terms of global indicators of the WHO. Klopper (1987) argues that the high infant mortality rate is because of racial and regional discrimination in spending and the emphasis placed on curative medicine. According to De Villiers (1993) the major causes of morbidity and mortality are diseases of poverty such as malnutrition, infectious diseases and trauma.

Substantiated further the Southern African Development Community policy framework of health,(1997) reports that the health status of the region needs to be considered within the historical, economic, and social context of the region. Poverty, under-development, unemployment and poor social and physical living conditions have had a negative impact on health status.

Table 2.1. shows health indicators of the health status of South Africa and neighbouring countries.

Member States	Life Expectancy			Maternal Mortality Ratio per 100 000 live births (1990-96)
	F	M	T	
Lesotho	**57**	**54**	**58**	610
Mozambique	48	45	46	1500
Namibia	63	59	61	225
South Africa	67	61	64	54
Swaziland	71	56	58	214
Zambia	47	44	42	649
Zimbabwe			61	283

TABLE 2.1: HEALTH STATUS IN NEIGHBOURING COUNTRIES AND THAT OF SOUTH AFRICA (WORLD DEVELOPMENT INDICATORS, 1998)

In South Africa the life expectancy at birth of the inhabitants of the Western Cape Province is the highest in the country, 67,7 years compared to the lowest of 59,7 years in the North West Province. The life expectancy at birth for the various population groups is presented in table 2.2. (Statistics in Brief RSA, 1997).

Year	RSA	Africans	Coloureds	Indians	Whites
1980	58.77	56.23	58.51	65.35	70.43
1991	62.77	60.30	66.46	68.89	73.11

TABLE 2.2: LIFE EXPECTANCY AT BIRTH BY POPULATION GROUP IN SOUTH AFRICA (STATISTICS IN BRIEF RSA, 1997)

The health status of the Coloured people as identified for the purpose of this study will be determined using the following health indicators:

- Diastolic and systolic blood pressure measurements
- Blood glucose levels
- Haemoglobin levels
- Blood Cholesterol levels
- Urine test for blood, glucose, and protein
- Weight and height measurements

Health beliefs are concepts about health that an individual believes true. Many of these beliefs may not be founded on fact but may be as a result of cultural or religious influence (Kozier *et al.*, 1995; Spector, 1996).

Health behaviour refers to the action people take to understand their health state, maintain an optimal state of health, prevent illness, and reach their maximum physical potential, for example regular exercise, eating wisely (Kozier *et al.*, 1995). However, Bagley *et al.* (1995) illustrates how race, ethnicity, cultural attitudes and practices are among the variables that influence health behaviours including adaptive health behaviours. While many strive for optimal health, Myers *et al.* (1995) shows how five behavioural risk factors namely, cigarette smoking, dietary intake, being overweight, limited exercise, and alcohol consumption relate to chronic diseases. Therefore, many factors that may influence an individual's health status, health beliefs, and health behaviour exist. Factors identified in the literature and that will be discussed in more detail in chapter 3 are the following:

- educational level
- environment
- family and ethno-cultural beliefs
- lifestyle
- occupation
- spiritual and religious beliefs
- social support networks
- socio-economic level

(Bagley *et al*, 1995; Bekker *et al.*, 1996; Brown, 1989; Cockerham, 1982; Kozier *et al,* 1995; Myers *et al.*, 1995; Rassool, 1995; Ratsaka and Hirschowitz, 1995; Turk and Kerns, 1985).

2.4 WELLNESS AND WELL-BEING

According to Rogers (1989) positive health symbolizes ***wellness***. It is a value term defined culturally or individually (Falco and Lobo in George, 1990; Kozier *et al.*, 1995). The Egyptian rules about hygiene were the forerunners of the Mosaic Code (Rogers, 1979). This code pertained to every aspect of individual, family and community hygiene and provided a sound basis for *"wellness", maintenance of health and prolongation of health* (Dolan *et al.*, 1983).

Anspaugh *et al.* (1991) describes *wellness* as a state of well-being. It refers to engaging in attitudes and behaviours that enhance quality of life and maximises an individual's potential. Basic components of wellness include self-responsibility, an ultimate goal, a dynamic growing process and decision-making about daily activities such as stress management.

People tend to confuse the process of health with the status of well-being. Well-being is a subjective perception of balance, harmony and vitality (Leddy and Pepper, 1993).

Dorothea Orem (in Kozier *et al.*, 1995) describes well-being as a state characterised by experience of contentment, pleasure, and certain kinds of happiness such as movement towards fulfilment of one's self-ideal. *Well-being* is associated with health, with success in personal endeavours and with sufficiency of resources.

According to Betty Neuman, (1989) *wellness* is the condition in which all parts and subparts of an individual are in harmony with the whole system. Optimal wellness or stability indicates that all the person's needs are being met. A reduced state of wellness is the result of unmet systemic needs.

Travis and Ryan (1988) describe wellness as "... *the right and privilege of everyone. There is no prerequisite for it other than your free choice*". Wellness is a choice, a way of life. Travis and Ryan (1988) explain that the "*well*" is not necessarily the strong, the brave, the successful, the young, the whole, or even the illness-free being. A person can be physically handicapped, aged, imperfect, or in pain and may still be living in a process of wellness. Wellness is never static. Travis and Ryan (1988) explain that a person does not just get well and stay well. There are degrees or levels of wellness.

Travis and Ryan (1988) condensed the following concepts about wellness:

- Wellness is a choice - a decision you make toward optimal health.
- Wellness is a way of life - a life-style you design to achieve your highest potential for well-being
- Wellness is a process - developing awareness that there is no end, but that health and happiness are possible in each moment, here and now.
- Wellness is an efficient channelling of energy - energy received from the environment, transformed within you and sent on to affect the world outside.
- Wellness is the integration of body, mind, and spirit - the appreciation that everything you do, think, feel and believe has an impact on your state of health.
- Wellness is the loving acceptance of yourself

Anspaugh *et al.* (1991) proposed five dimensions of wellness (Figure 2.1). According to Anspaugh in order to achieve optimal health and wellness people must address factors within each of these dimensions. Dimensions in wellness as proposed by Anspaugh are:

- Physical: The ability to be able to carry out daily tasks, to achieve fitness, maintain adequate nutrition and proper body fat, avoid using tobacco and alcoholic products, practise positive lifestyle habits.
- Social: The ability to interact successfully with people and within the environment of which each person is a part. To be able to develop and maintain intimacy with significant others and to develop respect and tolerance for those with different opinions and beliefs.

- Emotional: The ability to manage stress and to express emotions appropriately. Emotional wellness involves the ability to recognize, accept and express feelings and to accept one's limitations.
- Intellectual: The ability to learn and use information effectively for personal, family, and career development. Intellectual wellness includes striving for continued growth and learning in order to deal with new challenges effectively.
- Spiritual: The belief in some superior being that serves to unite human beings and to provide meaning and purpose to life. It includes one's own morals, values, and ethics.

These dimensions overlap to some extent, factors within one dimension may often directly affect factors in the other. For example, a person who is in the process of learning to control daily stress levels from a physiological perspective is also learning to control the emotional stamina needed to cope with a crisis. Therefore, the integration of all factors indicates wellness as shown in figure 2.1.

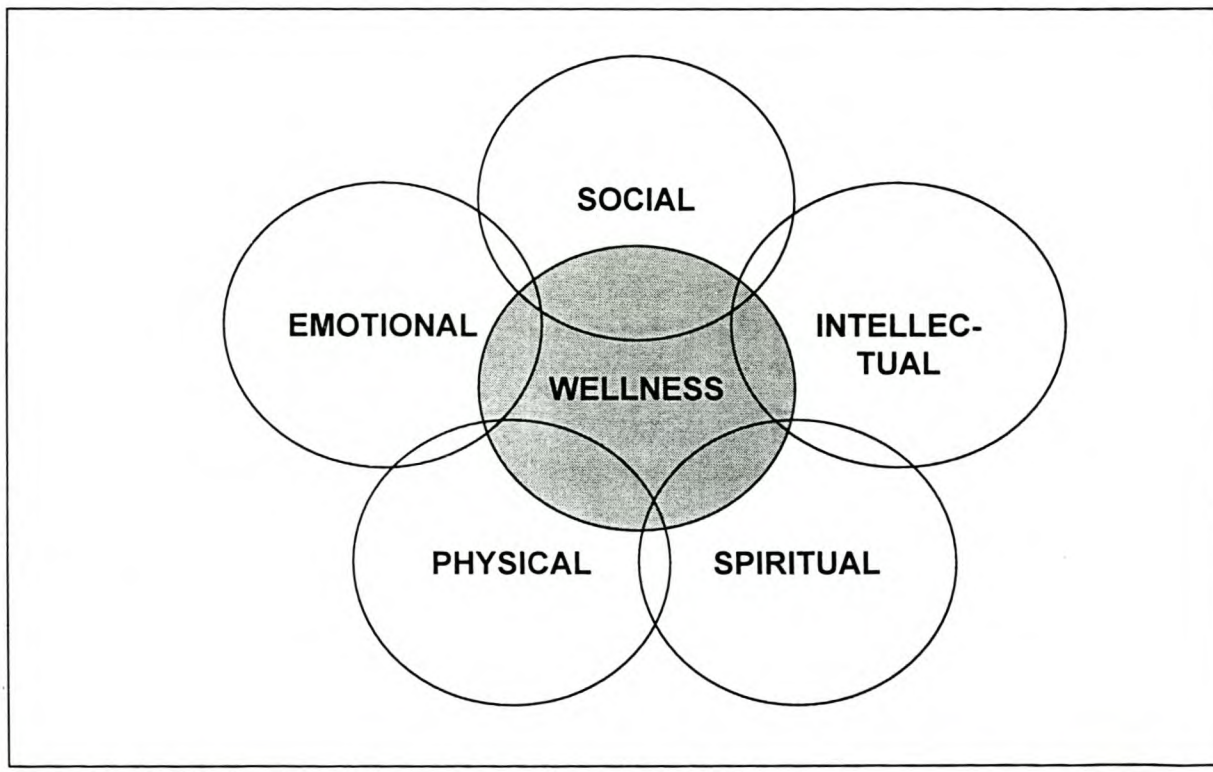


FIGURE 2.1: DIMENSIONS OF WELLNESS (ILLUSTRATION BY RESEARCHER)

In conclusion, it may appear that ***well-being and wellness*** are similar concepts, but well-being as defined by Orem (in Kozier *et al.*, 1995) is merely a state characterized by an experience of satisfaction or contentment. In contrast, ***wellness*** as described by Anspaugh (1991) consists of five dimensions that are constantly in interaction to obtain optimal health.

2.5 ILLNESS AND DISEASE

According to Kozier *et al.* (1995) many view illness and disease as the same entity. However, health professionals generally view it as two separate entities. According to Delaune and Ladner (1998) *"...illness is the inability of an individual's adaptive responses to maintain physical and emotional balance that subsequently results in an impairment in functional abilities".*

Illness is a highly personal state in which the person feels either unhealthy or ill (Kozier *et al.*, 1995). DeLaune and Ladner (1998) explain further that illness *"... means different things to different people*". Illness can be interpreted and explained in terms of personal experience and expectations (Spector, 1996). Field in Tuckett (1977) clarifies illness further by stating that illness refers primarily to a person's feelings, pain and/or discomfort. It is possible to feel ill without suffering from a disease or without feeling ill but to have a disease. (Field in Tuckett, 1977; Kozier *et al.*, 1995). From a sociological perspective illness is explicitly designated as a form of deviant behaviour. Various groups of "*sick*" or potentially "*sick*" people may define illness in terms of changes in feelings, a psychological orientation, or changes in capacities, a social orientation, or in terms of biological changes according to Twaddle in (Jaco, 1979). Illness can be defined in terms of signs, symptoms, capacities for role performance, and feeling states which fall within the experience of most individuals. The criteria used to define illness may vary in the degree to which any given criteria must be present for an individual to be called "*ill*". How ill an individual is perceived, is determined through social definition (Field in Tuckett, 1978; Twaddle in Jaco, 1979). According to Kozier *et al.* (1995) a person's family, culture, social network and environment may influence illness. It can be because of the interaction of mind, body, and environment.

According to Delaune and Ladner, (1998) and Kozier *et al.*, (1995, 2000) illness is classified as acute and chronic. An acute illness is described as a rapid onset of symptoms but of short duration. It may be serious in nature and require medical

intervention. Chronic illness is characterised by a gradual onset of symptoms that lasts an extended period, usually longer than six months or even longer .

Disease is a more specific concept, defined by Field as in (Tuckett, 1978) "... *a condition of the body, or of some part or organ of the body, in which its functions are disturbed or deranged* ..." while illness is defined more loosely as "... *the quality or condition of being ill* ..." . According to Kozier *et al.* (1991) disease may further be described as acute or chronic, communicable, congenital, degenerative, functional, idiopathic, psychosomatic or malignant. Kozier *et al.* (1995) defines disease as "... *an alteration in body functions resulting in a reduction of capacities or shortening of the normal life span*". It was not until the late nineteenth century that the major concern of health professionals was the "*how*" of a disease, that is pathogenesis. The causation of a disease is called aetiology. Several factors may act together to bring about a particular disease. For example, the tubercle bacillus is designated as the biological agent of tuberculosis. However, other factors such as age, nutritional status, may influence the development of the disease (Kozier *et al.*, 1991).

In this text the researcher shows that illness may or may not be related to a disease. It is a highly personal state in which the individual experiences ill-health. In contrast an individual may suffer from a disease but may not feel ill. An example to illustrate this may be seen in somebody suffering from diabetes mellitus that feels healthy despite the underlying disease.

2.6 MODELS AND THEORIES RELATED TO HEALTH, WELLNESS AND CULTURE

The researcher in her analysis of health and its related concepts has shown above that these are complex issues. These concepts are described from various perspectives. Because of its complexity many researchers have developed models and theories to explain health and its related concepts. Consequently, a discussion of models and theories concerning health and its related concepts follows. It is hoped this will promote a better understanding of these concepts.

2.6.1 A theory of health and disease: The Objectivist-Subjectivist Dichotomy

Robert Sade, a Professor of Surgery (1995) describes his theory about health and disease as ***"The Objectivist-Subjectivist Dichotomy",*** a philosophical approach. In this theory Sade (1995) shows that at the core of many social, political and ethical disputes in health care lie different conceptions of what it means to be healthy or to suffer from a disease. Labelling a condition may have a positive or negative effect on the bearer of the condition. When alcoholism is a disease, the alcoholic receives more sympathy from society and is possibly in need of treatment rather than being morally defective; when homosexuality is a disease gays may be stigmatised as being sick and in need of treatment. The alcoholics will therefore welcome the disease label while the gays resist it. The levels of payment by insurance companies are in most cases determined by classification of various conditions as diseases and payment is determined according to a treatment code. According to Sade (1995) if health and disease are based on what is desirable or undesirable, subject to approval or disapproval, a potential exists that many individuals or groups may be mistreated. Sade (1995) thus argues in this regard that it is important to seek an objective framework so that judgements of health and disease are removed from the subjective domain.

2.6.1.1 Subjectivist Theories

As a departure point Sade (1995) refers to Socrates who posed a question to Euthyphro namely "... is a goal good (or desirable) because it is desired, or is desired because it is good?" Considering the goal good because it is desired, gives priority to the desire. It allows no standard by which to judge the desire's appropriateness or goodness. In this case value is subjectively based. The second alternative gives primacy to the goodness of the goal, the desire for it being appropriate insofar as the goal is good. In the latter case the goal, as given, provides an objective basis for the determination of value. Sade (1995) explains that by using this distinction, one could say that conceptualisations of health and disease which are based on the view that desiring, as a subjective state, is prior to the desirability (or goodness) of a goal, can be classified as subjectivist theories, while those giving primacy to the goal, can be classified as objectivist theories. Sade (1995) explains in the light of the above distinction that, according to Boorse, (1975, 1976, 1977) health is the functioning of any living thing in conformity with its

natural design. Normal functioning determines health and is statistically definable through empirical observation and measurement. Boorse (1975, 1976, 1977) identifies value with subjective desires, then argues that health is certainly desirable, some undesirable traits are clearly not disease such as short stature, poor co-ordination. While there are some diseases under some circumstances, desirable - cowpox in the middle of a smallpox epidemic. Sade (1995) explains that Boorse therefore rejects valuation as part of the notion of disease, taking a subjectivist approach to the Euthyphro question. Boorse (1975, 1976, 1977) has a strong objectivist approach as illustrated in the following *"... Organisms are goal-directed... that is, they are disposed to adjust their behaviour to environmental change in ways appropriate to a constant result".* In this biological chain or network of values, the ultimate value is life.

Sade (1995) explains further that the reductionist theories are value free, only if they accept the view that ***desiring*** is before ***desirability*** (or goodness) of a goal in determining value. They are therefore reductionist by virtue of their subjectivist theory.

The second type of health theory is the relativist view which relates health and disease to values, generally holding that characterization of conditions or states of a person as healthy or diseased requires consideration of what is desirable and undesirable, good and bad.

2.6.1.2 Objectivist Theories

Sade (1995) explains that Lennox (1995) proposes that health is a value concept based on empirical biological fact. He gives priority to the goal as the good, asserting that the standard of value against which success (health) or failure (disease) of any biological function can be measured, is the life of the organism.

The concepts of health and disease are thereby both evaluative and biologically grounded, and they are so regardless of personal or cultural attitudes. According to Sade (1995) Lennox's (1995) argument is coherent and persuasive and constitutes an important contribution to the literature on concepts of health and disease.

Sade (1995) supported by Rasmussen and Den Uyl (1991) explains further that

successful living for a human being is not merely survival, it is living a flourishing human life. A special kind of goodness exists that is only possible for human beings: moral goodness. The morally good appears when a value is achieved through a choice made by the person. The idea of moral goodness makes praise and blame of human beings possible. Morality within an individual allows him / her to act in such a way that he/she achieves the goals or values that are appropriate to intelligent living as a human being.

There are therefore two kinds of values, biological and moral. Biological values pertain to all living things while moral values pertain to rational beings that have the ability to choose. Like all values, moral values are part of a chain or web of ends that are at the same time means to other ends. The ultimate goal in human beings is a fulfilled life, intelligently lived.

Moral values include virtues such as rationality, justice, honesty and generic goods such as financial, educational, physical (health related), sexual and psychological. These are common to all human beings and are required for their flourishing. These virtues are objectively attainable. Sade (1995) explains that despite their commonality to all human beings, each person acquires these virtues or goods in various degrees. The amount of time and effort that goes into pursuing each of these goods may differ and is determined by individual judgement.

Moral evaluation is therefore individualized and pluristic, but is not subjective because it is not grounded on desires and preferences that are independent of human ends; it is objective because it is grounded on empirical facts and reason. For human beings the use of intelligence in pursuing and using values is a requirement of morality. One of the values the flourishing life requires is ***health.*** Morality for human beings, in the form of choices made intelligently or unintelligently, plays an important role in pursuing and attaining health.

Health can be pursued through the deliberate development of habits that support it, that is ***through the development of wellness that*** can be considered a virtue contributing to a successful human life. Parallel with the distinction between biological and moral values, a distinction can be drawn between biological health and moral health. Biological health refers to well-functioning of the physical body that leads to survival. Moral health refers to well-functioning of dispositions, attitudes, and desires. Both these lead to a healthy body and human flourishing.

There is objective biological grounding for the moral value of wellness in the empirical measurement of its structural and physiological correlates. Sade (1995) concludes that Lennox (1995) has shown there is a connection between the value (the life of a living thing) and empirical biology. This is valid not only for values shared by all living things, but also for moral values, particularly the virtue of wellness.

Wellness as a habit of healthful choices may help to avert diseases and premature death. It may also maintain physical fitness at a level consistent with the needs of the individual. These fitness levels can be both chosen and objectively measured.

Moral values related to health are proper diet, programmatic exercise, accurate and sparing use of medications, avoidance of harmful agents like tobacco and excessive alcohol or of harmful activities like driving fast.

The practice of the virtue of wellness moves bodily function toward the good of uncompromising living, and because of this, is both an end in itself and an integral part of a flourishing individual. An additional feature of health as the goal of a habit of healthful choices is the presence of vigour, fitness and sense of well-being that are the pleasurable outcomes of a healthy life.

2.6.2 Wellness Model

John Travis (Travis and Ryan, 1988) first developed the illness/wellness continuum in 1972, a graduated scale that can be used to measure a person's perceived level of wellness. The scale ranges from high-level wellness to premature death. The model figure 2.2 illustrates two arrows pointing in opposite directions, which are joined in the centre, the neutral point. Movement to the right of the neutral point indicates increasing levels of health and well-being of the individual. This is achieved through (1) awareness, (2) education (3) growth. However, movement to the left of the neutral point indicates a progressively decreasing state of health. According to Travis and Ryan (1988) a simple model cannot always convey a complex concept. They have identified that the continuum can be misleading in one significant way. Namely, it is possible to be physically ill and still be orientated towards wellness or physically healthy and still be functioning from an illness mentality. What is of importance is not the point on the continuum the person might identify as the current state, but the direction on the pathway in which the person

is facing towards High-Level Wellness or towards Premature Death.

Consider the following illustration about a person who is in physical good health but is always complaining or worrying. He / she might be standing on the right side of the continuum but facing towards the left that is towards "premature death". Similarly, another person who is in pain or who is handicapped physically or mentally, can still have a genuinely positive, optimistic outlook, be cultivating love instead of fear, and consequently would be facing towards the right in the direction of "high level wellness". Kozier *et al.* (1995) explains that should the emotional, intellectual, and spiritual dimensions be considered, this person would be standing on the right, facing in the direction of high-level wellness.

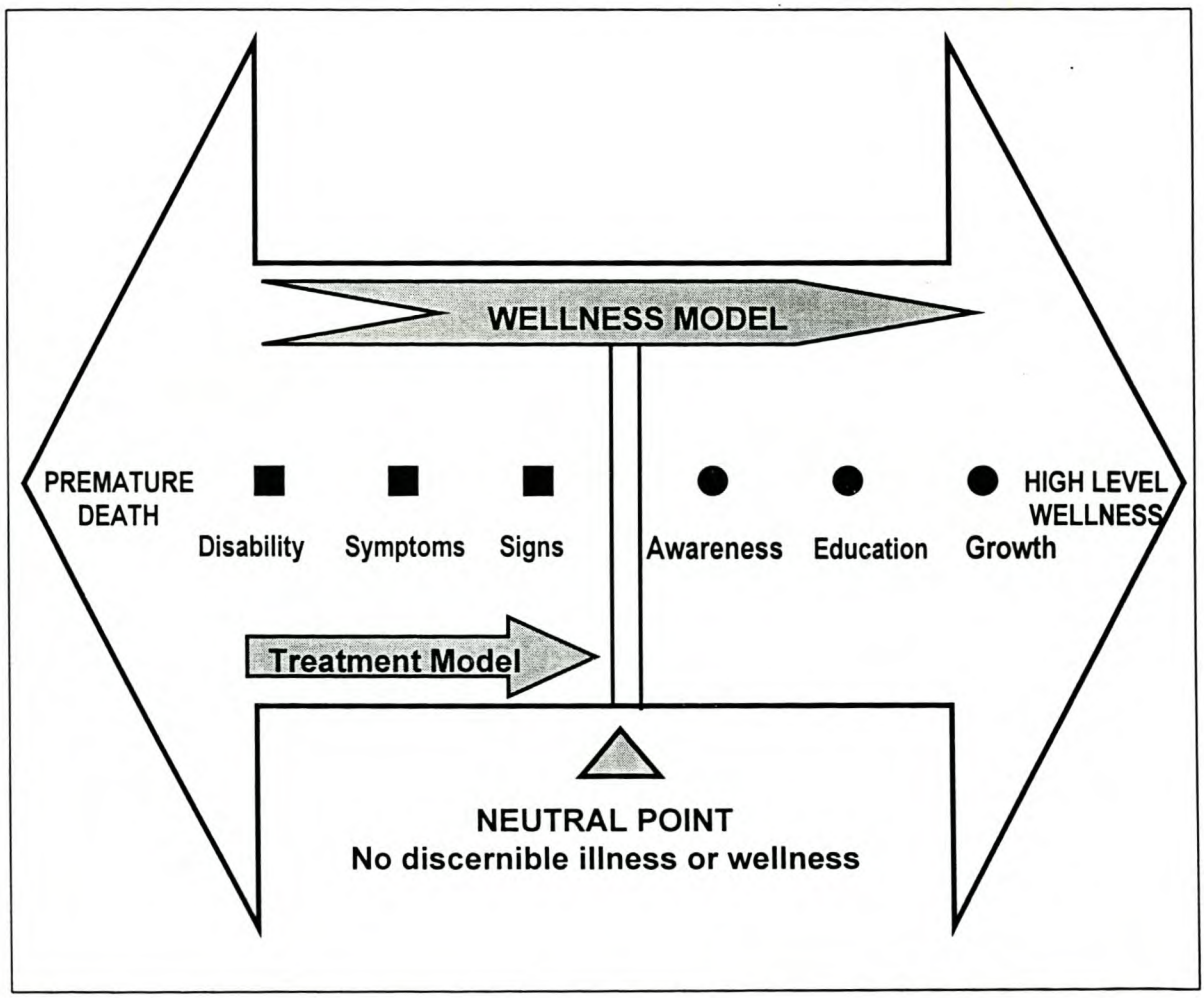


FIGURE 2.2 ILLNESS/WELLNESS CONTINUUM (Travis J in Travis and Ryan, 1988)

The model also compares the traditional treatment model with the wellness model. The former can help move an individual from the left only to the neutral point where signs and symptoms are alleviated. For example: A person with hypertension who takes antihypertensive medication to reduce blood pressure and to relieve any associated symptoms moves to the neutral point. However, wellness-oriented measures such as reducing weight or ceasing to smoke will take the individual beyond the neutral point towards the high-level of wellness. Travis and Ryan (1995) indicates that wellness measures can be introduced at any point of the continuum. For example a nurse treating the patient with hypertension might also incorporate the following measures:

- assess life stressors and emotional disturbances
- Instruct the client about non-pharmacological approaches such as reducing weight, restriction of alcohol, salt, smoking, regular exercise, and education on relaxation techniques.
- encourage the client to join support groups to control weight, smoking and stress.

Thus both the wellness and treatment model can work together.

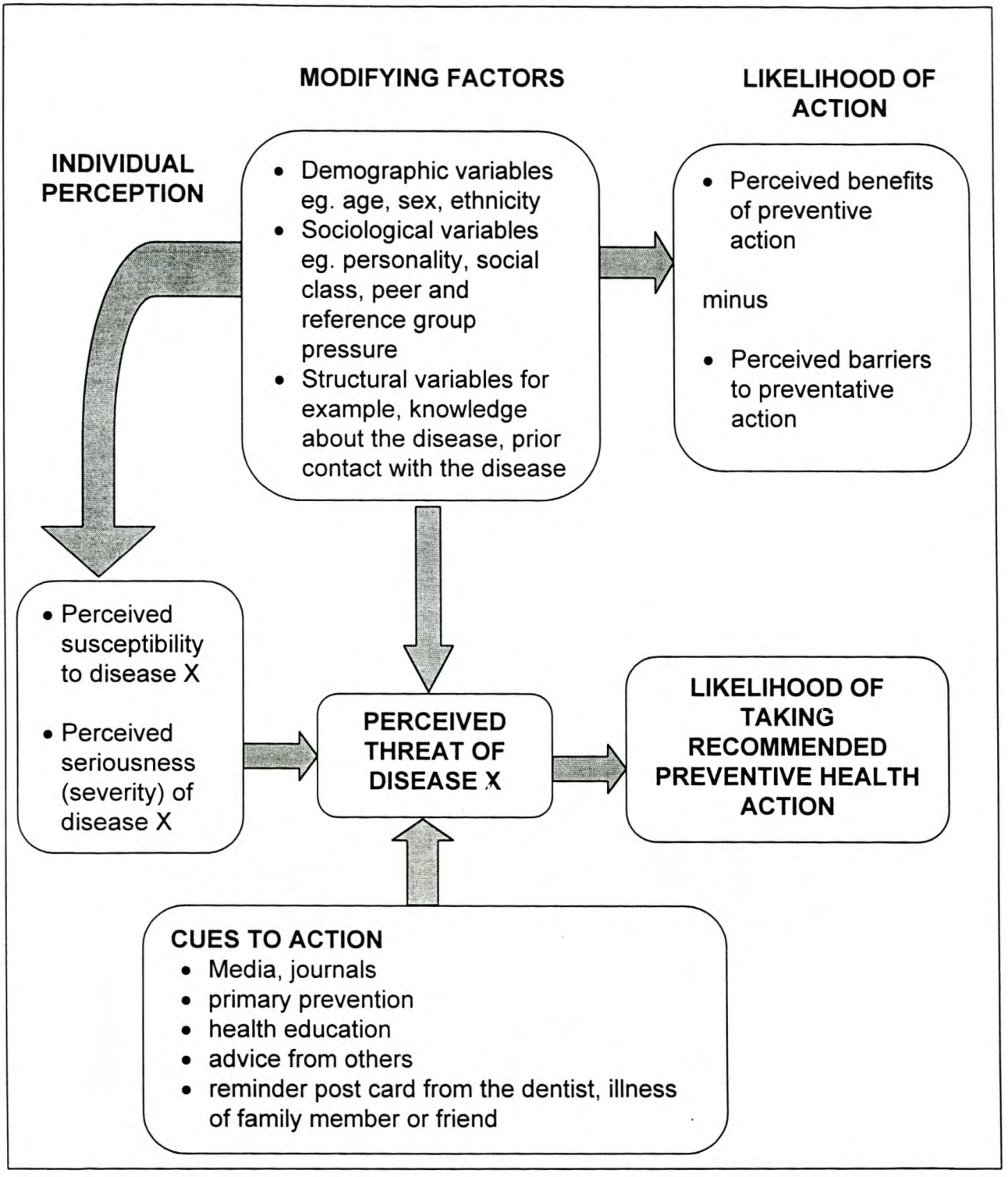
2.6.3 Health Belief Model

Figure 2.3 illustrates the Health Belief Model (HBM) as described by Rosenstock *et al.* (1988) hypothesizes that health-related action depends upon the stimulation occurrence of three classes of factors:

(i) The existence of sufficient motivation (or health concern) to make health issues salient or relevant.

(ii) The belief that one is susceptible (vulnerable) to a serious health problem or to the sequlae of that illness or condition. This is often termed perceived threat.

(iii) The belief that following a particular health recommendation would be beneficial in reducing the perceived threat, and at a subjectively-acceptable cost. Cost refers to perceived barriers that must be overcome in order to follow the health recommendation; it includes, but is not restricted to, financial outlays.



(Becker in Kozier *et al.*, 1988)

FIGURE 2.3: THE HEALTH BELIEF MODEL

It was already in the 1950s that Rosenstock (1974) proposed a health belief model intended to predict which individuals would or would not use such preventive measures as screening for early detection of cancer. Becker (1974) modified the health belief model to include the following components:

- individual perceptions
- modifying factors
- variables likely to affect initiating action

The health belief model is based on motivational theory. According to Kozier *et al.* (1995) Rosenstock assumed that good health is an objective common to all people. Becker however, added "positive health motivation" as a consideration (Kozier *et al.*, 1995).

2.6.3.1 Individual Perceptions

Individual Perceptions as discussed by Becker (1974) include the following:

(a) Perceived susceptibility

This can be explained by the following example, a family history of a particular disorder such as diabetes mellitus or cardiac disease, may make the individual feel at high risk.

(b) Perceived seriousness

The question is how serious or critical is the disease concerned. Will this disease cause death or have serious consequences such as acquired immune deficiency syndrome (AIDS).

(c) Perceived Threat

Becker explains that perceived susceptibility and perceived seriousness combine to determine the ***total perceived threat*** of an illness to a specific individual. For example: A person perceives that there are many individuals in the community that

have AIDS. This may not be a problem to the person. However, if the person is a drug addict or a homosexual, the perceived threat of illness is likely to increase because of the combined susceptibility and seriousness that is present.

2.6.3.2 Modifying Factors

Many factors exist that modify a person's perceptions. These include:

(a) Demographic variables

Demographic variables such as age, sex, race and ethnicity. An infant, for example, does not perceive the importance of a healthy diet, the adolescent may experience that peer approval is more important than family approval.

(b) Socio-psychological variables

An individual may be influenced positively through social pressure, such as applying preventative health measures despite low individual motivational levels. Expectations of others may motivate people, such as abstaining from alcohol before driving a motorcar.

(c) Structural variables

Structural variables presumed to influence preventative behaviour are knowledge about a disease and prior contact with the disease. Becker who found higher compliance rates with prescribed treatments among mothers whose children had frequent ear infections illustrates this. This is further substantiated by the researcher in her research about the laryngectomees whose quality of life improved after receiving knowledge about the consequences of a laryngectomy (Stellenberg, 1995).

(d) Cues to action

Cues to action are described as either internal or external. Internal cues include feelings of fatigue, uncomfortable symptoms or thoughts about the condition of an ill person who is close. External cues could be mass media campaigns, advice from others and a reminder postcard from the dentist.

2.6.3.3 Variables likely to affect initiating action

A person likely to take recommended preventative health action depends on the perceived benefits of the action minus the perceived barriers to action.

(a) Perceived benefits of the action

Examples include refraining from smoking to prevent lung cancer. Eating nutritious foods and avoiding snacks to maintain weight.

(b) Perceived barriers to action

Perceived barriers to action can include cost, inconvenience, unpleasantness and lifestyle changes.

Pender (1987) in Kozier *et al.* (1995) adds two further considerations, namely, the importance of health as perceived by the individual and perceived control.

(c) The importance of health to the person

This is observed when a person's behaviour shows that health is perceived as something valuable by providing special foods and vitamins, having regular dental checkups, participating in screening tests for the screening of cancer of cervix, testes, breasts and for cardiovascular disorders.

(d) Perceived control

People who have control over their health are more likely to use preventative services than people who feel powerless. Control over health can relate to such behaviours as not smoking and using seat belts in motorcars.

Nurses play a major role in helping clients implement healthy behaviours. They may show clients how to monitor their health, supply anticipatory guidance and empower patients with knowledge about health. They can assist patients to break down perceived barriers to action such as reducing discomfort, inconvenience and supporting patients positively (Kozier *et al.*, 1995).

2.6.4 Models on the stages in health seeking

The researcher has chosen to discuss the model on health seeking by Igun a Nigerian, (1979), as it is more relevant to the African continent. In African societies two or more well-defined systems of medicine and health care exist. In contrast the model as described by Suchman in Cockerham (1982) assumes a single system of medicine and health care. According to Igun (1979) Suchman's model is limited when called upon to explain health-seeking in societies where there are two or more well-defined systems of medicine and health care, complementing or competing with each other. This enables patients to select a source of care of their choice.

Igun's (1979) model on health seeking describes eleven stages and is briefly described as follows:

(1) Symptoms-experience stage

There are four core aspects in this phase:

(a) ***The physical experience***. This is the actual experience of physical pain, discomfort, change of appearance or debility.

(b) ***The cue process*** refers to a process, which may be composed of a continuing event, or events, which gradually produce or lead to the awareness that something is wrong with one's health. The cue process could

be absent in sudden acute infections or accidents. The type of illness therefore determines the cue process.

(c) ***The cognitive aspect*** refers to the interpretation and derived meaning for the individual experiencing the symptoms.

(d) ***The emotional response*** refers to fear or anxiety that accompanies the physical experience, cue process and the cognitive interpretation. The level of anxiety varies; it could be high in cases that seem serious or low in minor cases. At the end of the symptoms-experience stage the case moves into either the self-treatment stage or into the stage of communication to significant others.

(2) Self-Treatment stage

Igun explains that there two major factors that will determine whether an individual will move on to this stage:

(a) Whether the individual believes he / she understands and can attach a label to the symptoms. If not able to, the individual is likely to move from the symptoms-experience stage to the stage of communication to significant others. Every person has a finite set of illness categories derived from direct experience or learnt from interaction with others in the culture, which the individual may use to label the illness states. Labeling enables the individual to adopt self-treatment.

(b) Whether the individual perceives the symptoms as not serious and capable of being removed by self-treatment. In an African setting, the individual uses self-treatment derived from either traditional or from Western-type medicine. The individual may omit self-treatment and move on to the stage of communication to significant others because of the following:

- The individual does not understand the symptoms and is therefore unable to attach a label.
- The individual experiences the symptoms as serious and not capable of being removed by self treatment.
- The individual may move to the next stage because the self-treatment has failed.

(3) Communication to significant others stage

Frankenberg in Ingun, (1979) refers to this stage as a social phenomenon. During this stage the individual may communicate the symptoms verbally or non-verbally. The symptoms, such as a fever, loss of appetite may attract the family members' attention. As an alternative the individual may communicate directly with a doctor. This stage may lead to or proceed almost simultaneously with the assessment of symptoms stage.

(4) Assessment of symptoms stage

At this stage, which may go on almost simultaneously with the communication to significant others stage, the individual suffering from the symptoms, members of his immediate family and close friends may assess the symptoms. This assessment determines two things:

- Whether the person should legitimately assume the sick-role.
- A tentative diagnosis of the illness state. At the end of this stage, the person may legitimately be an incumbent of the sick-role.

(5) Assumption of the sick-role stage

The individual assumes the sick-role; the person is socially legitimately incumbent.

(6) Expression of concern stage

Significant others such as family and friends show concern. Many offer diagnosis and or recommend treatment. This is the instrumental aspect of their concern. This is the stage when lay referrals begin to exert influence on treatment actions. This stage may co-incide with the next stage of "assessment of probable efficacy or appropriateness of sources of treatment".

(7) Assessment of probable efficacy or appropriateness of sources of treatment

According to Igun (1979) in every society, there is a taxonomy or language of illness categories and labels which may be attached to illness states. This taxonomy also contains guidance and ideas about appropriate treatment or action for various illness stages. In Nigeria the Urhobo may need the treatment of a traditional healer particularly for certain illnesses believed to have been caused by a witchcraft activities while most acute infections will be treated by Western-type medicine. During this stage the diagnosis is also made. Treatment alternatives, as in Nigeria, may include the use of the lay traditional medicine, the use of the services of the traditional healers, the use of services provided in medicine stores and hospitals. At the end of this stage a decision is made to implement a treatment plan.

(8) Treatment stage

Various treatments and costs are assessed. The patient may defer from that of the health professionals advice. Treatments may be selected from any of the following:

(a) receive treatment at a hospital
(b) receive treatment from a nearby medicine store, consult with the owner and buy the treatment
(c) call on a lay person to prepare a herbal remedy
(d) consult a traditional healer
(e) involve oracle consultation to determine if witchcraft was involved
(f) it may include ritual sacrifice. This stage can end in death or lead to the next stage.

(9) Assessment of effects of treatment on symptoms stage

During this stage the treatment is assessed for success, if it is not successful, there will be a return to a previous stage, possibly "symptoms-experience stage" and from there to the "assessment of probable efficacy or appropriateness of sources of treatment" to follow the subsequent stage again.

(10) Recovery and rehabilitation

The patient returns to earlier health status before illness or experiences temporary or permanent disability.

To conclude this model Kozier *et al.* (1995) reiterates that by knowing the stages of illness and the illness behaviours that accompany them, nurses can better understand their patients and determine ways to assist them. Illness behaviour is "... any activity undertaken by a person who feels ill, to define his health and to discover a suitable remedy" (Igun, 1979).

2.6.5 Leininger's theory: cultural care diversity and universality

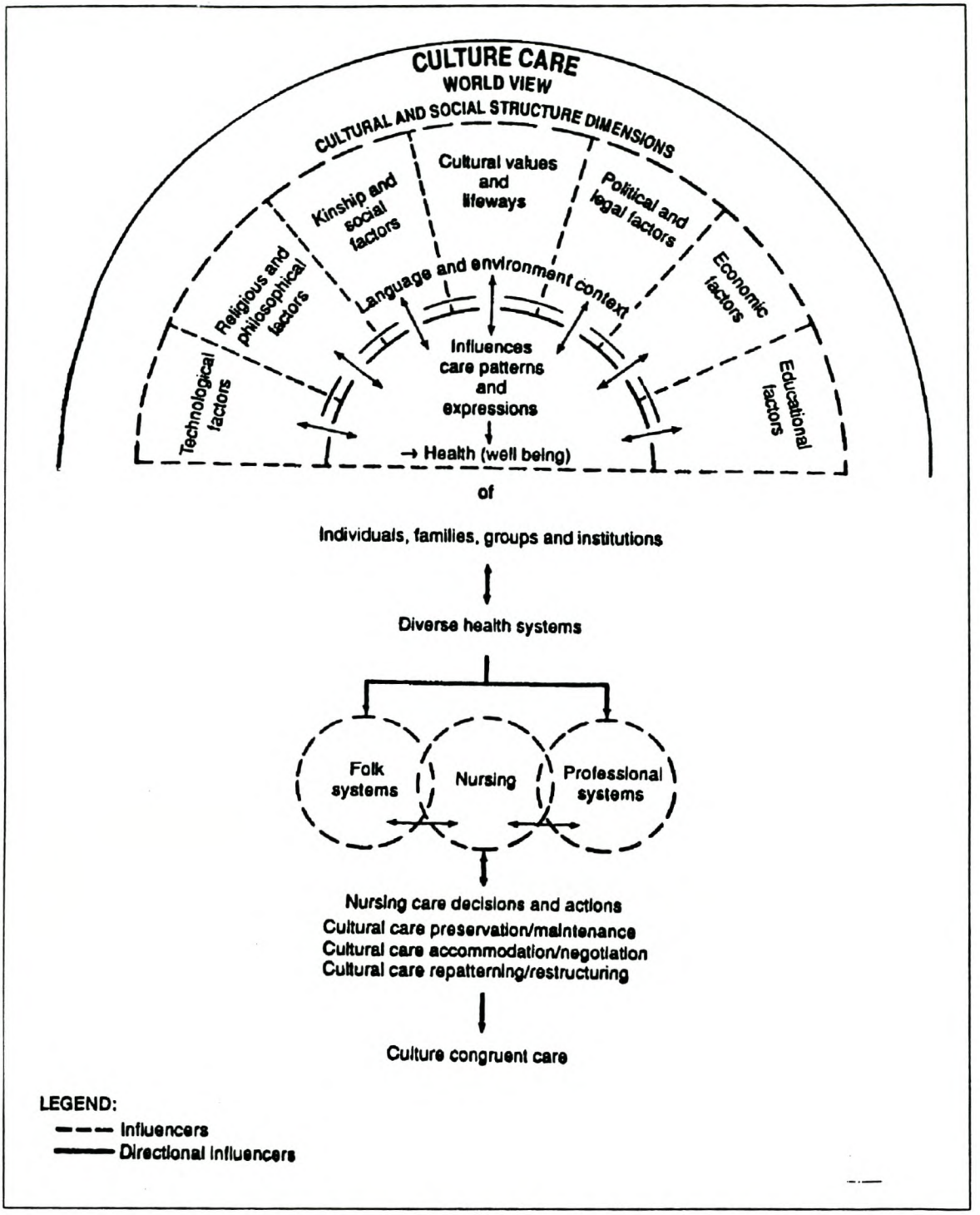
Leininger in George (1990) depicts her theory of cultural care diversity and universality in the Sunrise Model as shown in figure 2.4. She explains that the model is not the theory but the purpose of the model is to aid the study of how the components of the theory influence the health status of, and care provided to, individuals, families, groups and institutions within a culture. The model may be viewed as having four levels, the first level being the most abstract and the fourth the least abstract. Levels one through three provide the knowledge base needed for the planning and delivery of culture congruent care.

The levels are described as follows:

(1) **Level one** is the world view and social system level, which directs the study of perceptions of the world outside the culture. This level leads to the study of the nature, meaning, and attributes of care from three perspectives. Values and social structure could be part of each of the perspectives.

The perspectives as described by Leininger are:

- the micro-perspective studies individuals within a culture, these studies could be on a small scale
- the middle perspective focuses on more complex factors within a specific culture
- the macro-perspective investigate phenomena across several cultures and on a large scale.



(Leininger in George, 1990)

FIGURE 2.4: THE SUNRISE MODEL

(2) **Level two** provides knowledge about individuals, families, groups and institutions in diverse health systems. This level provides culturally specific meanings and expressions in relation to care and health.

(3) **Level three** focuses on the folk system, professional system, and nursing. Information from Level three includes the characteristics of each system as well as specific care features of each. The information obtained allows for the identification of similarities and differences, or cultural care diversity and cultural care universality.

(4) **Level four** focuses on nursing care decisions and actions. It involves cultural care preservation or maintenance, cultural care accommodation or negotiation and cultural repatterning or restructuring. It is at this level that nursing care is delivered. In Level four of the Sunrise Model, culture congruent care is developed. This care is both congruent with and valued by members of the culture.

2.7 CONCLUSION

To improve the scientific foundation of this research project, the researcher has attempted to show the relevance of various models and theories concerning the study. In this chapter a literature study directed at an in-depth review of health and its related concepts was described. There is no doubt that in this chapter more clarity is obtained about concepts that are abstract and not easily understood. Related models and theories, which bring about an increased understanding about health and its related concepts, were also described. Furthermore, it results in an increase in insight and understanding of human behaviour, with reference to an individual's beliefs about health, health status, illness and disease, well-being and wellness, health seeking behaviour and cultural diversity.

CHAPTER 3

LITERATURE REVIEW: FACTORS INFLUENCING THE HEALTH STATUS OF AN INDIVIDUAL

3.1 INTRODUCTION

In this chapter, an in-depth literature review about the factors influencing the health status of an individual is presented. Scientific evidence that shows how an individual's health is influenced by several interrelated factors has been obtained. Lillie-Blanton and Laveist (1996) confirm that health and well-being are generally recognized as a function of multiple interrelated factors, including biological and social factors, lifestyle behaviours and the use of health services.

Existing variables that influence an individual's health status, health beliefs, and health behaviour could be internal or external. These may also be under conscious or unconscious control, thus a person may choose to lead a healthy or unhealthy life (Kozier *et al.*, 1995). Behaviours of choice include high risk health behaviours such as smoking, using drugs, alcohol abuse, and sexually transmitted disease such as AIDS (Bagley et al., 1995; Kozier *et al.*, 1995; Torres and Vilarrue, 1995). According to Kozier *et al.*, (1995) people have little or no control over internal factors such as genetic make-up, age, sex, physical environment, and culture. For the purpose of the study the researcher will proceed to show the prevalence of the following factors (as identified in the literature) that influence the health status, health beliefs, and health behaviours of the individual:

- lifestyle
- socio-economic status (income, occupation and education level)
- environment
- family and ethno-cultural beliefs
- social support networks
- spiritual and religious beliefs

(Bekker *et al.*, 1996; Cockerham, 1982; Kozier *et al.*, 1995; Rassool, 1995; Ratsaka and Hirschowitz, 1995; Turk and Kerns, 1985).

Genetic factors will not be investigated because of the following:

- According to Prof CJ Groenewald, the co-promoter of the study the Coloured people are not an ethnic group but a mixed race with no specific genetic pool
- Genetic studies of a population require a high level of specialized knowledge in genetics

3.2 LIFESTYLE

Cockerham *et al.* (1993) indicates that the concept lifestyle is used in various scientific traditions. In the health sciences, the concept is informed by epidemiology and is used to emphasize that individual behaviours have an important role to play in the understanding of disease (Winett, 1995). Most of the chronic diseases such as emphysema are multi-causal and are so because of an interaction between behavioural factors, environmental circumstances, and physiological characteristics (Brunner and Suddarth, 1996; Kozier *et al.*, 1995; Uitenbroek *et al.*, 1996).

According to Uitenbroek *et al.,* (1996) lifestyle does not refer to health, socio-economic, socio-psychological or other status, knowledge, attitudes and motivations. These factors are considered to be a cause, or in health status, a consequence of "*lifestyle*". Substantiated further by Kozier *et al.* (1995) "*lifestyle*" refers to individual behaviours that are open to choice and in which individuals differ. Lifestyle is not only limited to individual behaviour but also emphasizes behaviours that are shared with people in similar circumstances (Uitenbroek *et al.,* 1996).

The lifestyle chosen by an individual includes patterns of eating, exercise, use of tobacco, drugs, alcohol and methods of stress management. Healthy lifestyle behaviours such as regular exercise or following a balanced diet could influence the health of an individual positively. However, unhealthy lifestyle behaviours referred to as high risk behaviours, such as smoking, the use of alcohol and drugs, no exercise, may influence the individual's health negatively (Brunner and Suddarth, 1996; Kozier *et al.*, 1995; Uitenbroek *et al.,* 1996). Overeating, the lack of exercise, obesity and smoking are closely related to the incidence of heart disease, arteriosclerosis, diabetes, atherosclerosis and hypertension (Brunner and Suddarth, 1996; Kozier *et al.,* 1995; Smeltzer and Bare, 2000). In a research study conducted by Uitenbroek *et al.* (1996) the relationship between indicators of health lifestyle,

sociodemographic and sociocultural factors was investigated. In this survey, the interaction between the following was determined:

1 Four health lifestyle behaviours namely smoking, diet, exercise and alcohol use
2 Four characteristics of the respondents, namely, educational level, employment, status and age
3 Three cities namely Varna in Bulgaria, Glasgow and Edinburgh in Scotland.

The results obtained in this study show that the differences in health behaviours between the Scottish cities and Varna are pronounced. Respondents in Varna, Bulgaria behaved the least healthily while those in Edinburgh proved healthier. Varna, being the poorest of the three cities with an unemployment rate of 17.4%, and an average income of £79.00 per month, had the most serious public health problems. Edinburgh, however, had an unemployment rate of 7.9% and an average income of £1571.48 per month.

This study further shows that a higher socio-economic level, which included education, is related to a better health status and better health lifestyle behaviours. Education is related to social position, occupation and living circumstances, all predictive of health status. Generally, education greatly affects the health status of an individual. It was also shown that people who were less educated within these cities smoked more, consumed alcohol less often, ate fruit and vegetables less and exercised less compared with the more educated respondents.

However, despite Edinburgh being a more affluent city, the use of alcohol in that city was the highest of the three cities while the least was consumed in Varna. This was attributed to the fact that people living in Edinburgh were in a higher income range than those living in Varna. Subsequently they could afford to buy alcohol. However, in Varna where people are less educated and have less money, less alcohol is consumed, but as Lynch *et al.* (1997) reports, the use of alcohol and socio-economic status is more complex. Fewer bouts of drunkenness are reported in the higher socio-economic levels in comparison to people of a lower socio-economic status. Despite the fact that this study is a correlation study between three cities it shows that an association exists between factors that influence the health status of individuals such as education, income and social habits.

Lynch *et al.* (1997) also validates that lower socio-economic status is associated with higher rates of smoking, obesity, poorer habits, lower levels of physical

exercise and higher prevalence of psychosocial orientations that are related to poor health outcomes. Clark *et al.* (1995) shows that there is an association between socio-economic status and exercise self-efficacy. People of a low socio-economic level are more reluctant to do exercise than those on a higher socio-economic level. The city of Varna has the highest cerebrovascular mortality rate in the world and also a high coronary rate (Uitenbroek *et al.,* 1996). The mortality and morbidity rates are associated with lifestyle factors (La Vecchia *et al.,* 1993).

3.3 SOUTH AFRICAN PERSPECTIVE

According to May *et al.*, (1998) in a report to the Deputy State President, South Africa is an upper-middle-income country in *per capita* terms, but despite this relative wealth, the experience of most South African households is of outright poverty or of continuing vulnerability to being poor. In addition, the distribution of income and wealth in South Africa is among the most unequal in the world, and many households still have unsatisfactory access to education, health care, energy and clean water.

Poverty is distributed unevenly among the nine provinces. Provincial poverty rates are highest for the Eastern Cape (71%), followed by the Free State (63%), North-West (62%), Northern Province (59%) and Mpumalanga (57%), and lowest for Gauteng (17%) and the Western Cape (28%).

Poverty is not confined to a particular race group, but is concentrated among blacks, particularly Africans: 61% of Africans and 38% of Coloureds are poor, compared with 5% of Indians and 1% of whites. Three children in five live in poor households, and many children are exposed to public and domestic violence, malnutrition, and inconsistent parenting and schooling. The child risk of poverty varies widely by province: in the Eastern Cape 78% of children live in poor households, compared with 20% in Gauteng.

There is a very strong correlation between level of education and standard of living. The poverty rate among people with no education is 69%, compared with 54% among people with primary education, 24% among those with secondary education, and 3% among those with tertiary education.

Poor children suffer a much higher than average rate of stunting. The national

malnutrition rate for children under 5 years of age is 9%, while children under 5 years of age with moderate to severe stunting is 23% (Unicef, 1998).

Hirschowitz and de Castro (1998) conducted a national survey of health inequalities in South Africa and identified the following:

- Africans and to a lesser extent Coloured people have lower levels of education than Indians and particularly Whites. More than one in ten Africans (12%) had no formal schooling and one in six (17%) had received a standard three education or lower. It was identified that 3% of the Coloured population had no formal education, 19% standard 4 or 5, 51% standard 6 to 9 and 13% had matriculated. Only 5% had higher education. Statistics obtained about the Whites in South Africa showed that 0% had no formal education, up to standard 3, 1%, Standard 4 or 5, 0%, standard 6-9, 34%, 31% matriculated and 34% had higher education. In this study Hirschowitz and de Castro (1998) identified that the health status and educational levels were interlinked.
- The study also identified that the unemployment rate is the highest among Africans, 51%, followed by Coloureds 27% in comparison to Whites, 13%. In the study the researchers identified that unemployment was an important variable, influencing health status.
- Among those who are working, 27% of the Whites are blue collar workers and 73% White collar workers, in comparison to the Africans of whom 82% are blue collar and 18% White collar, among the Coloured population, 69% are blue collar and 31% White collar. Therefore the Whites are of a higher socio-economic level than the other population groups.

According to Lynch *et al.* (1997) lower socio-economic status is associated with higher rates of smoking, obesity, poorer habits, lower levels of physical exercise and higher prevalence of psychosocial orientations that are related to poor health outcomes. On the contrary, Hirschowitz and de Castro (1998) identified that the higher, rather than the lower socio-economic status, was linked to heavier smoking. Statistics show that Whites smoke an average of 20 cigarettes per day, compared to Indians 12 per day, Coloureds 9 per day and Africans an average of 8 per day. A large proportion of White respondents (67%) claimed to drink alcohol, compared to relatively fewer Coloureds (41%), African (28%) and Indian (17%). As education increases Coloureds and Africans are less likely to drink alcohol. Among the Whites the pattern reverses, the higher the education, the more likely they are to consume alcohol.

In a national health survey (Department of Health,1998) the prevalence of smoking among adults identified that of all South African males 42% and females 11% smoke. Higher smoking rates were observed in the urban areas compared to the non-urban areas. The majority of male smokers were identified in the Northern Cape (58%) followed by the Western Cape (49%). The majority of female smokers were identified in the Northern Cape (31%), followed by the Western Cape (31%).

In an outreach project (Stellenberg,1996) among Coloured farm labourers living on a Durbanville farm, 100 people's health status was determined through health screening as described in paragraph 1.1.

In this project behavioural risk factors that affected the health status of the participants were identified as follows:

(i) A diet high in meat and salt content. The farmer supplied each worker with fresh meat at least three times per week. An abundance of meat existed. Consequently meat was consumed at breakfast, lunch and supper. Fresh vegetables and fruit were rarely eaten.

(ii) Tobacco smoking. Unfiltered homemade cigarettes were made and smoked. Smoking started at the age of 15-16 years and in some individuals at an even younger age. Respondents smoked 3-4 of these home-made cigarettes per day.

(iii) Alcohol abuse. All adult males consumed a minimum of three bottles of wine per day while the females drank predominantly during weekends. Drinking of wine started after the worker stopped working at about 18h30 and continued until about 22h00.

(iv) All participants were labourers (male and female) who did strenuous physical work. Due to the nature of their work no other physical exercise was undertaken. Participants were physically too tired after a day's work. Relaxation and management of stress were associated with drinking alcohol. At times these habits led to conflict and assault.

The participants were unable to associate regular exercise and healthy ways of managing their stress with good health. Blood pressure findings showed that 50% of the 72 participants were adults of which 50% were referred to a doctor because of hypertension. Systolic readings varied between 150-230mmHg. and diastolic between 100-130mmHg.

Similar results were obtained in a second project (Stellenberg, 1997) in which

factors influencing the health status of the participants were determined. Three hundred and twenty members of a fishing community of 1000 people that is 32% were screened. The sample included Coloured people of all social classes but predominantly those of a low socio-economic status.

The health status of the people was determined through screening for high-risk behaviours and underlying diseases not known to the individual. Of the ninety-eight adults who were referred 40% were hypertensive. In both projects findings were associated with the lifestyle led by the participants.

In a study conducted by de Villiers et al. (1999) among people of a low socio-economic level in a predominantly Coloured community in the Western Cape the following findings were obtained:

- Chronic diseases: tuberculosis 5%, heart 13%, nerves 15%, asthma 16%' diabetes mellitus 20%, hypertension 33% and arthritis 23%
- Acute diseases: respiratory infections 25%, stomach complaints 8%.
- Social habits related to lifestyle show that 72,1% smoke with 26,7% using alcohol regularly.
- Unemployment 42,5%
- 38,3% unskilled labouers
- A third of the community earn less than R1000 per month

Steyn *et al.* (1994) in a report on chronic diseases of lifestyle indicates that 53% of deaths in the Western Cape during 1990 were due to chronic diseases. Approximately 200,000 of the inhabitants are diabetics, asthmatics and rheumatic sufferers, and a further 400,000 are hypertensive and suffer from chronic obstructive airway disease.

In a national survey (MRC for Department of Health, 1998) national data about adult, adolescent and maternal health were reported. Tables 3.1 and 3.2 show the self-reported chronic conditions among males and females on a national level according to age. Table 3.3 shows national data about self-reported conditions among adult Coloured males and females above the age of 15 years.

	AGE		
CHRONIC CONDITIONS	**25-34**	**35-44**	**45-54**
Blood Pressure	2,7	7,5	18
Ischaemic Heart Disease	1,9	2,8	4,6
Hypercholesterolaemia	1,2	1,8	4,3
Diabetes Mellitus	0,8	2,5	5,3
Emphysema	2,8	2,9	8,6
Asthma	1,9	4,0	4,7
Tuberculosis	2,4	4,1	5,2
Cancer	0,2	0,0	0,5

TABLE 3.1: SELF-REPORTED CHRONIC CONDITIONS OF ADULT MALES IN SOUTH AFRICA [MEDICAL RESEARCH COUNCIL (MRC) FOR DEPARTMENT OF HEALTH, 1998]

	AGE		
CHRONIC CONDITIONS	**25-34**	**35-44**	**45-54**
Blood Pressure	8,0	15,1	30,5
Ischaemic Heart Disease	4,2	4,3	7,2
Hypercholesterolaemia	0,8	0,3	3,0
Diabetes Mellitus	1,6	2,7	7,2
Emphysema	3,7	4,4	6,5
Asthma	3,2	3,4	5,6
Tuberculosis	1,8	2,0	2,6
Cancer	0,3	0,6	0,9

TABLE 3.2: SELF-REPORTED CHRONIC CONDITIONS OF ADULT FEMALES IN SOUTH AFRICA [MEDICAL RESEARCH COUNCIL (MRC) FOR DEPARTMENT OF HEALTH, 1998]

	GENDER	
CHRONIC CONDITIONS	**FEMALE**	**MALE**
Blood Pressure	22,3	9,0
Ischaemic Heart Disease	5,4	2,9
Hypercholesterolaemia	1,9	1,3
Diabetes Mellitus	5,8	3,1
Emphysema	7,3	8,6
Asthma	5,0	4,5
Tuberculosis	3,3	4,5
Cancer	0,7	0,3
TOTAL	**806**	**637**

TABLE 3.3: SELF -REPORTED CHRONIC CONDITIONS OF ADULT COLOURED FEMALES AND MALES [MEDICAL RESEARCH COUNCIL (MRC) FOR DEPARTMENT OF HEALTH, 1998]

According to an epidemiological report (1997) cancer of the cervix is the most common cancer among Coloured females (24,5%) followed by breast cancer (20,2%). Cancer of the cervix is associated with an early age of first sexual intercourse, number of sexual partners and poor socio-economic conditions.

Cancer of the prostrate gland is the most common among Coloured males 1 in 30 while cancer of the lungs is the third most common cancer among them (8,6%). Cancer of the lungs among Coloured females (3,1%) are also alarming it ranked fifth of all cancers affecting Coloured females. One of principal causes of lung cancer is smoking. Lung cancer is increasing in populations that have smoked tobacco for prolonged periods (Epidemiological Comments, 1997).

According to Kotzenberg (1997) cancer caused by lifestyle affects Black South Africans most. The risk factors for certain cancers include poor socio-economic conditions, tobacco, alcohol, irresponsible sexual behaviour and a diet lacking in vitamin A and C (or fresh fruit and vegetables) roughage and a diet high in fat.

3.4 SOCIO-ECONOMIC STATUS

The components of an individual's standard of living are reflected in occupation, income and education level. These components are referred to as the indicators of socio-economic status (Kozier *et al.*, 1995; Clark *et al.*, 1995). In South Africa most of the population *"... constitutes a radically deprived community who are chronically poor, badly housed, inadequately educated and whose daily lives are a simple struggle for survival"* (Van Niekerk, 1993). According to Landman, a South African philosopher, in Van Niekerk (1993) *"... the poorer one is, the more one's energies are consumed by the requirements of bare physical survival ..."*. The South African government is currently concerned with bringing about equity in health care to all its citizens. Despite the fact that South Africa is classified as a middle income country with an estimated per capita GNP of US$2670 in 1992, spending 8,5% of the GDP (gross domestic product) on health care, the country exhibits major disparities and inequalities resulting largely from previous policies which ensured racial, gender and regional disparities (Department of Health, 1995).

Table 3.4 is an extract from the 1997-1998 national budget to show an analysis of the budget allocated to social upliftment. The budget shows that the government is trying to bring health equity to all its citizens.

Sector	Budget (R million)	% of total	% change, 97/98 vs. 96/97
SOCIAL SERVICES	**88 600,9**	**46,9**	**+ 8,9**
Education	40 270,5	21,3	+ 2,8
Health	20 223,4	10,7	+ 9,5
Social Security and Welfare	18 433,2	9,8	+ 12,2
Housing	4 161,9	2,2	+ 21,0
Other (Recreation, Culture, Sewerage, Sanitation, Community Development)	5 512,0	2,9	

TABLE 3.4: FUNCTIONAL CLASSIFICATION OF CONSOLIDATED NATIONAL AND PROVINCIAL EXPENDITURE (DEPARTMENT OF FINANCE, 1997)

A 1989 survey identified that the average income in a Black household was R629, while that of a White household was R2180, that is 3,4 times as much. Only one fifth of the Black households have an income that can be considered above the minimum effective level. The top 10% of the population generated 52% of dispensable income in the country while the lowest 50% only generated 7.2% of such income (Savage and Benatar, 1990).

The majority of the population of South Africa has inadequate access to basic services, including health, clean water and basic sanitation. According to 1994 statistics, between 35% and 55% of the population live in poverty. Furthermore, 75% of the poor live in rural areas compared to 53% of the general population (Department of Health, 1995). Hirschowitz and de Castro (1998) identified that 42% of adults lived in rural homeland areas. Proportionately more females (48%) than males (36%) live in rural areas in the former homelands. It was identified that 50% of adults lived in overcrowded households. At the time of the research it was found that 76% of adults have piped water and 86% have toilets. This shows an improvement and can be attributed to social change since the birth of the New South Africa in 1994. The government has committed itself to the redevelopment of the country and to remedying the disparities of the past. A large sum of money from the 1997-98 national budget has been allocated to redevelopment.

Finance for redevelopment projects (RDP) amounting to R 4,368 billion were

provided as part of the normal 1997/98 budgetary process, compared to R 13,88 billion allocated in the 1996-97 budget. This allocation was no longer channelled through the RDP Fund. Approximately 40% of the total amount earmarked for RDP projects was included in transfers to provinces. This comprised:

- R 680 million for free health care
- R 500 million for the primary school nutrition programme
- R 500 million for community water supply and sanitation
- R 350 million for bulk infrastructure for housing
- R 300 million for land redistribution
- R 250 million for urban renewal
- R 200 million for the Maputo corridor and similar initiatives
- R 100 million for peace initiatives in KwaZulu / Natal

Other RDP programmes included in the 1997-1998 budget were a clinic building programme, the culture of learning programme, the school building programme, support for improvements in policing and the criminal justice system. A further R300 million was set aside for community-based poverty relief programmes (Department of Finance, 1997).

Internationally there is consistent evidence that people who are socio-economically disadvantaged "...suffer a heavier burden of illness and have higher mortality rates than their better-off counterparts" (Mackenbach and Kunst, 1997). Substantiated by Paradis e*t al.* (1995) populations of low socio-economic status have a higher prevalence of cardiovascular disease risk factors, higher rates of cardiovascular disease morbidity and mortality, than populations of higher socio-economic status. As described in paragraph 3.2 findings obtained in the project (1996) on the farm labourers show that 50% of the adults who were referred to a doctor were hypertensive. Systolic pressure varied between 150-230mmHg, and diastolic between 100 -130mmHg.

Socio-economic status is closely related to health, morbidity and mortality (Clark et al., 1995; Kozier *et al.,* 1995; Lahelma *et al.,* 1997; Lynch et al., 1997; Mackenbach and Kunst, 1997; Uitenbroek *et al.*, 1996; Wannamethee *et al.,* 1995).

This is validated further in a study by Hart et al. (1995) who investigated variations in cardiovascular risk factors and cardiovascular mortality between social classes

in terms of different social mobility experience. It was identified that there were lower levels of risk factors and cardiovascular mortality in those experiencing upward social mobility. Those remaining in manual social classes experienced the worst outcomes. According to Bartley (1994) there is still some controversy over the extent to which excess morbidity and mortality among the unemployed might be a result of those in poorer health being at higher risk of unemployment as well as further at risk of ill health or death. Understanding the relationship between unemployment and ill health and mortality warrants the consideration of four mechanisms, namely the role of relative poverty, social isolation, loss of self-esteem and health related behaviour. Lahelma *et al.* (1997) identified that the unemployed tend to have a poorer health status than their employed counterparts. Hirschowitz and de Castro (1998) reported that 12% of the Coloureds who are unemployed claim that a health problem or handicap prevents them from finding a job. It is interesting to note that the lower the level of education amongst both Africans and Coloureds, the more likely they are to claim that a health problem prevents them from finding work. It was identified that 15% of those with no schooling compared to 8% with matriculation made this claim (Hirschowitz and de Castro, 1998).

Research shows that job-loss is highly stressful, and can be characterized as a form of bereavement. Stress is known to affect physical health further down the line as a result of chronically increased levels of anxiety. Unemployed people also tend to be heavier smokers and drinkers (Bartley, 1994). According to Clark *et al.* (1995) socio-economic status is an aspect of the sociocultural environment that influences health behaviour and health promotion efforts. Low socio-economic status is associated with a greater frequency of undesirable life events, less effective coping strategies and constrained resources. Consistent global evidence proves that people at a socio-economic disadvantage suffer a heavier burden of illness and have higher mortality rates than their better-off counterparts. Thus socio-economic inequalities in health are a major challenge for health policy. Gulliford *et al.* (1995) in an investigation substantiates that chronic non-communicable diseases such as diabetes mellitus are major contributors to the morbidity and health care costs in middle-income countries like Trinidad and Tobago. Results obtained show that the greatest burden of complications of diabetes was found among those who had the lowest educational attainment. These were also the people who were the most dependent on government health services and who found access to the minimum level of services difficult to achieve. This study concludes that government services should be better directed at those with the greatest health needs.

The potential for improving the average health status of populations was recognized by the member states of the World Health Organization in the European Region. A strategy "Health for All" was adopted as its first "target". It was decided that by the year 2000 the differences in health status between countries and between groups within countries should be reduced by at least 25%. This could be achieved by improving the health of the disadvantaged nations and groups within countries - an ambitious target that may not be realistic everywhere. This strategy gives clear focus to health policy and promotes the monitoring of quantitative changes over time in socio-economic inequalities in health, which is essential in order to assess the effects of health policy interventions (Mackenbach and Kunst, 1997; Heintz and Jardine, 2000).

Sarntisart (1994) illustrates how poverty and income inequality affect health care. Thailand has shown exceptional economic growth over the past three decades. However, the country has failed to distribute the benefits of economic growth equitably and the distribution of income has become more unequal. Consequently the maldistribution of income has implications for equity in health. Sarntisart (1994) shows that when the income becomes so low that people cannot survive or maintain normal activity, their poverty indirectly creates problems for those who are not poor. It becomes a cost to the whole community in terms of crime and medical problems to name but a few.

Blackburn (1992) is of the opinion that many causes of ill-health among low-income people illustrate *"... that the health of poor families is not within their personal control and is the outcome of low income and poor access to health resources*". In South Africa 23.6% of all South Africans are members of a medical aid. To analyze this further 81.3% of all White South Africans do have a medical aid insurance, against 3.6% of all Blacks (Savage and Benatar, 1990).

According to Kidson (1994) only a few industrialized countries in the world can claim true equity in access to their health care systems and some, such as the USA, exhibit glaring inequities in this regard. A low per capita GDP alone does not preclude equitable availability of health care as occurs in countries such as Sri Lanka, China. Increased GDP in countries such as Thailand, contributed markedly to accentuation of poverty by way of grossly disproportionate distribution of newfound wealth across individual nations. Kidson (1994) explains that this disproportion reflects changing patterns of job opportunities requiring newly-upgraded educational qualifications; demographic shifts in investment requiring

population movement, especially from rural to urban areas; alterations in food supply and pricing patterns affecting the affordability of basic nutrients and disturbances in social structure which reduce the security of supportive communities. While the middle class is expanding and swaying the political arena for priority spending on better infra structure so as to improve their own pockets, the urban slums and degraded rural villages compete for assistance and often they are not heard.

Rosenberg and Hanlon in their study (1996) show that accessibility and utilization of health services need not only be seen in a framework that incorporates an individual's health and socio-economic status, but also in the health service environment in which the individual lives. The use of health services may either increase or decrease depending on where the individual lives. This could be attributed to individuals who value freedom of choice and individual mobility. A positive relationship has been identified between the middle to upper socio-economic income groups and the use of the general practitioner and specialist services. It is conversely related to utilization of emergency services and admissions to hospitals. Rosenberg and Hanlon (1996) suggest that this is because middle and upper income individuals are more likely to have a family physician and practice preventative health care. Consequently their health status benefits indirectly from being able to afford better housing, better diet and such like.

In contrast the individuals of a lower income are more likely to use emergency services or be admitted to hospital due to difficulties they encounter in their daily lives. These individuals are less likely to have a family physician or practise preventative health care.

Inequalities in health care among population groups existed within the apartheid era and the implications thereof still exist within many population groups. A study conducted within the Bloemfontein region shows that the Coloured and Black populations experience the most difficult problems with reference to distance between their residences and service health points in comparison to the White population. Distance from the point of residence to the health service may implicate the use and access to these services.

Coloured and Black groups are also at a disadvantage in terms of affordability and acceptability of health care. Consequently professional health care is more accessible for some groups than for others. The inaccessibility of health care affects

the utilization thereof and also has an effect on the health care requirements that manifest themselves. In the same study it was found that many of the Black and Coloured respondents reported that they had to wait long hours before they were assisted while White respondents reported that they were helped very quickly (Van Vuuren and De Klerk, 1996).

An inadequacy of medical services exists for the majority of South Africa's people. Services are concentrated in the urban areas. Approximately 76% of all doctors work in metropolitan areas, 18% in small towns and 5% in the rural areas despite the fact that 50% of the population lives in rural areas (Van Niekerk, 1993). According to the Department of Health (1995) 75% of the poor live in the rural environment.

With reference to the projects conducted by the researcher as discussed in paragraph 3.2. extenuating circumstances were encountered by both groups namely accessibility, availability, and affordability of health services.

Poverty and malnutrition are correlated positively. Malnutrition is a fundamental ingredient of a wide spectrum of diseases of poverty. It is also a deterrent to education, which is essential for an ultimate escape from poverty. According to Sarnitisart (1994) *"... health care is a necessity for the rich households while it is a luxury for the poor ..."*. In Thailand expensive private hospitals expanded rapidly, obviously for the wealthy, while the country has an infant mortality rate of 27 per 1000 live births against the record of 4 per 1000 in Japan (World Development Report, 1993).

Mackenbach and Kunst (1997) recommend that socio-economic inequalities should be monitored and it implies the repeated measurement of differences between, socio-economic groups in the occurrence of health problems. As described in paragraph 3.2. Uitenbroek *et al.* (1996) shows the interaction between four health style behaviours namely, smoking, diet, exercise, alcohol use and educational and employment status. In this study it is shown that the socio-economic status of an individual influences the health of that individual. This is supported by Lynch *et al.* (1997) who indicates that lower socio-economic status is generally associated with higher rates of smoking, obesity, poorer diet habits, lower levels of physical activity and higher prevalence of psychosocial orientations that are related to poor health outcomes. It is interesting to note that people of a lower socio-economic level are reluctant to participate in exercise programmes. To alter self-efficacy or outcome

expectations among low socio-economic status persons, the values and context-specific constraints will have to be addressed. Those who have limited education regarding factors that predict outcome expectations, require a greater understanding. The predictors of outcome expectations are embedded within social context (Clark *et al.,* 1995).

It is shown that while individuals make choices about how they act, those choices are situated within economic, historical, family, cultural and political contexts. Adult health behaviour and psychosocial orientations are associated with socio-economic conditions throughout the life course. Poor adult health behaviour is related to a poor socio-economic start in life, low levels of education and blue-collar employment. Findings in this study suggest that childhood, adolescence and adulthood are all potentially important stages for attempts to alter the health-related behavioural and psychosocial profiles of adults (Lynch *et al.,* 1997). Wannamethee *et al.* (1995) identified and substantiated that socio-economic status in childhood affects the cardiovascular risk in adulthood. Therefore, the efforts to reduce socio-economic inequalities must recognize that *"... economic policy is public health policy* .." (Lynch *et al.,* 1997).

Various occupational roles predispose individuals to certain illnesses. Industrial workers may be exposed to certain carcinogenic substances. The more affluent individuals are exposed to too much stress because of stressful social or occupational roles. Such roles can also lead to overeating or use of drugs or alcohol (Kozier *et al.,* 1995).

3.5 ENVIRONMENT

An individual's physical environment, which includes housing and sanitation facilities, may affect the health of an individual. Air, food and water pollutants are often directly or indirectly related to various types of cancer (Kozier *et al.,* 1995). The work environment is becoming more and more hazardous to the individual's health. This is attributed to modern industry that has become more complex and increasingly hazardous because of the greater number of toxic and carcinogenic substances used. Many diseases such as chronic obstructive airways disease and mesothelioma occur as a result of exposure to dust in mines (Vlok, 1991).

Kozier *et al.* (1995) points out that the environment of an individual of low socio-

economic level or in poverty-stricken areas also has a bearing on overall health. Slum neighborhoods are overcrowded and in a state of deterioration. Infrastructure that includes sanitation, water supply, roads and removal of waste is poor. Garbage may be strewn all over and the area infested with rats. Social pathologies such as crime, sexual assault are constant threats.

Substandard housing schemes found in rural as well as in urban areas are often dark, poorly ventilated, crowded and shared with domestic animals. Satisfactory sanitary arrangements are frequently non-existent, squatting in the bush being an accepted way of dealing with human excreta. Poor housing is also found in the Arctic regions where studies on the health status of the Eskimos in Alaska show high rates of tuberculosis, bronchiectasis, pneumonia and upper respiratory tract infections. This is not only due to the cold climate, but also because of badly ventilated dwellings with polluted air, the pollution being exaggerated by cigarette smoking. In the highlands of New Guinea, the high prevalence of chronic pulmonary disease appears to be due to the burning of smoky wood fires as a method of heating the small closed huts (Vlok, 1991).

Low income families live in houses that are badly designed and poorly constructed. Consequently many of these individuals live in damp, noisy, overcrowded accommodation that is associated with physical and mental health problems and increased accident rates among adults and children. Studies have shown that there is a close statistical correlation between housing tenure and health. Research shows that owner-occupiers are likely to have the lowest death rates and council tenants the highest death rates (Blackburn, 1992).

Kogevinas's study (1990) in Blackburn (1992) suggests an association between deaths from cancer and housing tenure. The study shows that male council house tenants were more likely to die from cancer of the face, oesophagus, stomach, larynx, bladder and lung. Women tenants especially were likely to die from cancer of the cervix than owner-occupiers.

According to Vlok (1991) the local authorities control the building of new dwellings in cities and towns and require that the builders submit plans for the buildings. The following conditions are required:

- adequate ventilation, no back to back buildings may be erected and floor and window space must adhere to certain specifications
- building site must be well-drained; damp proof courses are to be placed in

the walls above ground level to prevent earth dampness rising from the ground into the house.

- dwellings must be built of durable materials and must be maintained in a good condition
- all dwellings must be supplied with running water, facilities for washing and sanitation and cooking facilities.

Local authorities are responsible for the adequate removal of excreta and household refuse and the supply of pure water. Despite these pertinent functions, the majority of the population of South Africa has inadequate access to basic services, including health, clean water and basic sanitation (Department of Health, 1995). According to Ramphele and Wilson (1989) 760 people living in the Mhala district of the former Transvaal shared one water tap. In certain areas of the former Ciskei the average water consumption per person is 9 litres as against the World Health Organization's aim of 50 litres per person per day.

3.6 FAMILY AND ETHNOCULTURAL BELIEFS

While genetic predispositions are passed on from generation to generation, so too are the patterns of living and lifestyles of a family. As illustrated by Kozier *et al.* (1995) a woman who was abused as a child may be more inclined to abuse her small son. Physical or emotional abuse may cause long-term health problems. Emotional health is therefore dependent on a stress and tension free social environment (Kozier *et al.,* 1995). Family membership is not determined by blood only but by the nature of the relationship between individuals who share values, norms and beliefs. As seen in the African-American context a family serves as a translator, negotiator, gatekeeper, stress absorber and stress buffer of family members. The family serves as a translator of disease and definer of illness behaviour according to cultural beliefs. The manner in which an individual perceives, experiences and copes with health and illness is partly determined by cultural beliefs. Cultural norms and beliefs about pain and suffering therefore influence the type of care sick members seek and accept within and outside the culture. There are people who may perceive home remedies or tribal health customs as superior and more dependable than the health care practices of the North American society (Kozier *et al.*, 1991). In many African-American communities self-care regimens dominate (Bagley *et al.*, 1995). Folk medicine practised in Africa is still being employed. Healers or voodoo practitioners make no

class or status distinction. Spector (1996) explains that this tradition of equality of care and perceived effectiveness accounts for the faith placed in the practices of the healer. Consequently home remedies used by the Black communities have been used for generations. The use of home remedies is also enhanced by the inaccessibility to hospitals and health services.

According to Shai-Makoko (1996) the use of the traditional healer as referred to in South Africa continues to function in the Black communities. Despite the healer's low education level, professionals such as teachers, nurses and ministers of religion use their services. Shai-Makoko (1996) points out that the traditional healer treats and cures diseases Western trained health workers in most cases fail to treat successfully. They prevent social conflicts by ritual cleansing and fortifying homesteads. They bring about harmony within the social environment by performing sacrificial rites for the ancestors. These are culturally acceptable to the people and are congruent with the people's belief systems.

The fight against AIDS has forced communities in KwaZulu-Natal to resort to an age-old ritual in which young girls are subjected to virginity inspections. This ritual is being supported by the Zulu monarchy, who believes the girls are the flowers of the country, as well as by the provincial health department. Groups of young girls are taken into the field to be inspected. It was a belief in the past that in this way pregnancy rates are reduced. Currently it is of particular importance in combating the spread of AIDS. However, questions are raised about how hygienic the inspections are. If the first girl is infected with the AIDS virus and the same pair of gloves or unwashed hands are used to inspect the rest of the line of girls, the entire row can be infected because of the inspection (Strachan, 1999).

Culture, therefore, could be described as the sum of beliefs, practices, habits, likes, dislikes, norms, customs, rituals that are learned within a family and passed on from generation to generation. Cultural rules, values and beliefs give people a sense of being stable and able to predict outcomes (Kozier *et al.,* 1991).

Ethnicity is more complex and includes characteristics such as common geographic origin, migratory status, race, food preferences, shared traditions, values and symbols, language and dialect to name but a few (Spector, 1996). Rassool (1995) reports that differences exist in the mortality and morbidity rates among ethnocultural minority groups in the United Kingdom and those of the White population. Ethnic minorities represent approximately 3 million (6%) of the

population in the United Kingdom. It is a heterogeneous population with a diverse cultural entity. This cultural diversity reflects a wide variation in lifestyle, health behaviour, religion and language. It has an effect on the individual's perception of health problems and ill-health which is constructed within the framework of Western medicine and health care system.

Anderson (1995) reports that wide disparities exist in the life expectancy and health status of ethnic minority populations and the majority of the population in the United States. Anderson (1995) identified that when the health status of subgroups within ethnic minority groups are examined, several differences are observed between their experience and that of the population. For example the risk for HIV infection is seven times higher in the Puerto-Rican-born Latinos than for non-Latino Whites. Deaths from injuries, liver disease and diabetes are the leading causes of excessive deaths in Native Americans relative to the majority population. Research indicates that behavioural, sociocultural and environmental factors contribute significantly to each of the causes of excess morbidity and mortality in ethnic minorities. It is a known fact that behavioural factors such as dietary patterns, smoking and alcohol consumption, high-risk sexual behaviours and aggressive behaviours are directly linked to causes of death in both minority and majority populations. Social and environmental factors such as poverty, culture, and residential environment, access to health care and exposure to racism form the context in which health behaviours arise.

In a study of the African-American people Myers *et al.* (1995) identified that the African-Americans consumed high-fat foods such as fried foods, bacon and sausage and that their intake of dietary fibre was low. An excess intake of dietary fat and an inadequate intake of dietary fibre are typical of a high-risk dietary pattern. There is substantial evidence that the dietary habits of African-Americans, especially among women, are strongly influenced by socio-cultural and socio-economic factors. This is an important contributor to the significant burden of excess morbidity experienced by this group.

From a cultural point of view, the African-American woman believes that being over-weight and even severely overweight is attractive and even seen as being very attractive (Kumanyika *et al.*, 1993). Myers *et al.* (1995) investigated five behavioral risk factors influencing the health status of four minority groups in the United States. Findings show that the African-American females are at greatest risk as their diets are high in fat, some evidence of exercise exists and smoking and alcohol

consumption show strong evidence of risk.

Myers *et al.* (1995) found that exercise among the African-Americans is limited. Recent data shows that this sedentary pattern is established early in life and is dominated by excessive television watching. It is consequently passed on from generation to generation. The combination of poor dietary habits, limited exercise and prevalence of obesity constitutes a major health risk complex for African-Americans. These individuals are certainly at a high risk to develop cardiovascular diseases. Smeltzer and Bare (2000) validate this statement. The Afro-Americans currently have the highest cardiovascular disease incidence in the United States of America (Smeltzer and Bare, 2000).

Another illustration is seen in research done on the Asian-Pacific Islanders. Many researchers and policymakers assumed that this group was healthier than the general public. This misconception has been supported by the belief that low utilization of health services can be equated with health. Despite having followed healthy diets in their own countries such as eating lean meat, once they were in the United States of America these islanders were found to be purchasing meat with fat. Available evidence shows that there is an 18% higher rate of lung cancer among the Southeast Asian men compared with White American men. It was suggested that immediate and effective anti-smoking programmes should be instituted for the South Asian population in order to combat the anticipated magnitude of lung diseases, including cancer (Myers *et al.*, 1995).

In a study by Torres and Villarruel (1995) it was found that Hispanic women were less likely to use illegal drugs such as cocaine, marijuana than White women. On the contrary, Hispanic women smoked more heavily than Anglo women. Hoeman *et al.* (1996) identified in a study that many barriers exist to women's use of early detection services common to most people such as access to health care, economic constraints and lack of knowledge. Health barriers are further compounded for Chinese women living in the United States by language barriers, socio-cultural values concerning health and sexuality and the lack of trust in Western health care.

The Chinese model on health is structured primarily to attain wellness, or to offset illness by methods, usually prescriptive, to maintain balances among the body humors. This model is not readily comparable to Western ideas about either prevention or cure. The Chinese do not believe in seeking health services without receiving a prescription for a remedy. The value or identification of the purposes of

using health-screening services is not perceived. The involvement of the husband in women's health also has a strong influence on a Chinese woman's decision on screening tests such as a regular breast examination (Hoeman *et al.,* 1996). According to Rawl (1992) in Chinese health practices, self-care and treatment such as diet therapy, herbal therapy, herbal remedies and exercise are valued. A Chinese women reported that she *"... use to have bad health in China because I did not exercise ...*".

The value accorded to life varies vastly. The American's health structure is balanced on a belief that death is the enemy and must be defeated at all costs. To allow a patient to die is to fail that patient and it means failure to cure. There are many of non-Western origin that may not believe that death must be grimly fought to the last possible moment. They may consider the pain and danger of transplants as too high a price to pay to stave off death. Instead they may place a high premium on dying with dignity and peacefully.

A clash of beliefs may be inevitable when a non-Western person encounters the full weight of the American health care system. *" ... Significant conflicts in belief are fertile soil for the seeds of moral conflict ...".* Each group's beliefs must be accorded equal respect. No group can be condemned for any practices resulting from their moral beliefs, no matter how repugnant or irrational it may appear to outsiders (Boyle and Andrews, 1989).

However, the health disparities that exist in the United States are not only as a result of ethno-cultural differences, but could be attributed to US segregation and discriminatory laws and practices. Social environment conditions are powerful contributors to racial disparities in health status (Lillie-Blanton and Laveist, 1996).

3.7 SOCIAL SUPPORT NETWORKS

According to Kozier *et al.* (1995) social support networks are closely related to an individual's internal factors of self-concept, cognition and psychological make-up. Consequently these influence an individual's ability to develop motivation and to develop supportive networks. Clark *et al.* (1995) identified in a study that emotional support had a significant and positive association with self-efficacy. Self-efficacy is defined as *"... a judgment of one's capability to accomplish a certain level of performance ...".* Social support during exercise sessions positively affected

exercise self-efficacy (Clark *et al.,* 1995).

Stronks *et al.* (1995) identified a positive relationship between marital status and certain health behaviours. It is reported in most studies that marriage has a deterrent effect on negative health behaviours such as smoking, excessive alcohol consumption and other risk-taking behaviour. However, studies show inconsistent results between marital status and obesity. To illustrate extracts from this study it was found that married people were the least likely to smoke and divorcees most likely to be current smokers. There were more teetotalers among those living with a partner than those not living with a partner.

Support people also bring about awareness to an ill person. Those with inadequate support sometimes allow themselves to become increasingly ill before seeking therapy. Support persons may have a motivational effect on someone who is ill to become well again (Kozier et al., 1995). Social support is essential when someone is stressed as it assists and facilitates an individual's coping skills. Emotional support from family and significant others, provides an individual who is ill, with love and a sense of sharing the burden (Smeltzer and Bare, 2000).

On the contrary, individuals with inadequate support networks sometimes allow themselves to become increasingly ill before they confirm their illness or seek medical attention. Those individuals with support also receive a stimulus to recover (Kozier et al., 2000).

3.8 SPIRITUAL AND RELIGIOUS BELIEFS

Religion is a major component of heritage consistency. It is the belief in a divine or superhuman power or powers that must be obeyed and worshipped as the creator(s) and ruler(s) of the universe. It is a system of beliefs, practices and ethical values. The practice of religion is revealed in various cults, sects, denominations and churches. Religious teachings help to present a meaningful philosophy and a system of practices within a system of social controls, these having specific values, norms and ethics. Religion provides an individual with a frame of reference and a perspective with which to organize information.

Religion plays a vital role in one's perception of health and illness. It strongly affects the way an individual interprets and responds to signs and symptoms of illness

(Spector, 1996).

Spiritual and religious beliefs can influence lifestyle, attitudes and feelings about illness and death (Kozier *et al.,* 1995). Religion may influence or prescribe specific practices about the diet of an individual, birth control, appropriate medical therapy, and the proper care of the dying or the dead (Kozier *et al.,* 1995; Spector, 1996). To illustrate this the Islamic person refrains from eating pork or drinking alcohol. Hinduism forbids the eating of meat. Judaism forbids an abortion on demand, so too Roman Catholicism believes an abortion is morally wrong and believes only in natural means of birth control (Kozier *et al.,* 1995). According to Spector (1996) religion and the piety of the individual determine not only the role that faith plays in the process of recovery, but also the response to a given treatment and the healing process. Many accept illness and look upon it as a test of faith and believe that if they have faith they will get well. There are, however, those who think that they are being punished. Disease is associated with immoral behaviour and the individual therefore believes that illness is punishment (Kozier *et al.*, 1995; Spector, 1996). According to Levin (1996) studies show that the religious or those practising religion, practise healthy behaviours such as smoking and drinking less. Social support is engendered through religious fellowship. The Seven Day Adventists are about the healthiest religious denomination in North America. These people on average practice healthy behaviours, they are integrated into supportive networks and have health-promoting patterns of worship, belief and faith. Members also intermarry.

The critical factor in all healing is that the evidence obtained suggests that faith in God truly is linked to a healthy lifestyle. This is substantiated further by Torres and Villarruel (1995) who identified in their research that the importance of religion as conceptualized by religious practice and belief, church attendance and valuing religion has been associated with less permissive attitudes about sex, limited sexual experience, and exerting protective behaviours in contraceptive use and pregnancy prevention.

However, there are certain spiritual beliefs that are in conflict with accepted medical practice. This is observed in individuals whose faith leads them to reject treatment even in life-threatening situations. The Jehovah's Witnesses will not accept any blood transfusions even in a time of an emergency as their doctrine forbids the treatment. Another example is that of the Christian Science religion that also avoids the use of blood products. Organ transplantation, either donor or recipient is rare

(Kozier et al., 1995; Spector, 1996).

3.9 CONCLUSION

In this chapter the researcher has shown how various factors influence the health status of an individual. These factors may have a positive or adverse effect on the health status. Evidently the health status of an individual is decided by several factors and not by a single factor only. South Africa is not unique in any of these issues. Factors that influence the health status of an individual are global issues. As described in paragraph, 3.1. there are existing variables that may influence an individual's health status, health beliefs and health behaviour. These could be internal or external. Individuals may have control or no control over them. For example, people may choose to lead a healthy life or indulge in the use of alcohol or drugs. In South Africa however, factors do exist that are affecting the health status of many, among others are the disparities and inequalities of policies of the past.

CHAPTER 4

RESEARCH METHODOLOGY

4.1. INTRODUCTION

In the preceding chapters, the researcher has described the background and frame of reference required for this study. An in-depth literature study dealing with health, wellness, illness, related models and theories was presented. In chapter 3, the researcher details how various factors influence the health status, health behaviour and health beliefs of an individual.

The purpose of this chapter is to define the research methodology that was applied to investigate the prevalence of factors influencing the health status of the Coloured people of the Western Cape in an urban setting.

This chapter includes the objectives of the study, the research design, hypothesis, reasoning strategies, duration, limitations of the study, validity and reliability, ethical considerations, population and sampling, pilot study, instrumentation and data collection.

4.2 RESEARCH APPROACH

A descriptive non-experimental approach was applied to investigate and describe the prevalence of factors influencing the health status of the Coloured people of the Western Cape in an urban setting.

4.3 GOAL OF THE STUDY

To investigate the prevalence of the factors influencing the health status of the Coloured people of the Western Cape in an urban setting.

4.4 OBJECTIVES

Objectives are specific measurable explanations of aims and will enable the researcher to decide if the problem has been solved. According to Burns and Grove (1993) " ... *objectives are clear, concise, declarative statements ...*"

The following objectives have been set for the purpose of this research study: (Also refer to the limitations of the study)

1. To determine the health status of economically active Coloured people in an urban area as defined with specific reference to the indicators as identified by the researcher.
2. To determine the prevalence of factors influencing the health status of economically active Coloured people in an urban area as defined.
3. To determine the relationship between the health status and the factors influencing the health status of economically active Coloured people in an urban area as defined.
4. To determine an association between factors influencing the health status of economically active Coloured people in an urban area as defined.
5. To make recommendations to the health policy-makers concerning factors influencing the health status of the economically active Coloured people in an urban area as defined and possibly related ethnic groups.

The study will not determine causality, but the prevalence of factors influencing the health status and associations between factors influencing the health status of the Coloured people as defined.

4.5 THE RESEARCH DESIGN

A descriptive cross-sectional design survey was conducted on the lower-lying geographical areas of the Cape Metropole to investigate the prevalence of factors influencing the health status of the Coloured people in an urban setting.

According to Hennekens (1987) a descriptive cross-sectional study is a type of prevalence survey. The study is conducted over a specific time window among individuals in a well-defined population to assess exposure and disease simultaneously. The purpose of this design is to provide information about the health experience of the population at a specified time.

According to Burns and Grove, (1993) a survey is in scientific thought a descriptive or correlational study. When used in this sense it is non-experimental.

The model as described by Dickoff et al. (1968) was used with the research design to isolate, relate, describe and explain the inter-relationships among concepts or propositions and finally to prescribe activities necessary to define goals.

4.5.1 Theory-Generating Design

The study commenced with the theory-generating design, which is constructed at four different levels:

- Factor-isolating theory
- Factor-relating theory
- Situation relating theory
- Situation-Producing theory

The lower levels are developed before the higher levels. These provide a basis for the higher levels of theory. The higher level of theory "... *presupposes the existence of theories at the lower levels*". Each higher-level theory adds a dimension of complexity (Dickoff *et al.,* 1968).

4.5.2 The Four Levels of Theory

(1) Factor-Isolating Theory

At this level of theory, the factors are isolated before they are conceptualised. The observations made at this level are described; the described data are then categorized. This level is very basic in nature and is frequently overlooked. The categorized data are named, creating concepts to stand for categories of information. The data is named in such a way that the total collection constitutes all the recognized subkinds of factors of the one given kind.

In recent projects (1996 and 1997) carried out by the researcher, she identified the prevalence of many factors influencing the health status of the Coloured people. Some of the factors identified were the following:

- Poverty

- Poor eating habits
- Low education levels
- Abuse of alcohol and drugs,
- Excessive smoking
- A lack of health education existed among Coloured people.
- Problems with accessibility, availability and affordability of health services.

(2) Factor-Relating Theory

The next level of theory becomes more complex. Factors are not seen in isolation but rather in relation. Statements or propositions, which propose how two or more concepts, are related and relate to the "*empirical generalization*".

The researcher believes that several variables that have an influence on an individual's health status exist. Despite the commonality of variables, individual and ethnic differences exist in the influence of these variables on individuals. There is a conspicuous absence of systematic research on the factors influencing the health status, and corresponding lack of data on adaptive health strategies among the Coloured population. The researcher argues that knowledge about the health status, health practices and health beliefs will improve the average health status of the Western Cape. The Coloured population is the largest population group in the Western Cape constituting 60.8% (2,125,000) of the total population.

(3) The Situation-Relating Theory

This is a predictive theory that has its aim to follow prediction. The theory must therefore have as ingredient causal-connection statements that give a basis for prediction.

In the study, the researcher predicts, that having acquired the knowledge about the prevalence of factors influencing the health status of the Coloured people of the Western Cape, it will result in the following:

- improving the average health status of the general population of the Western Cape.
- restructuring of health services for maximum use by the people
- provision of better medical care making it more accessible to the community

who need it.

- better and accessible medical care will not only help the people, but will also influence the economy positively.

(4) The Situation-Producing Theory

This is a more complex theory that has three essential ingredients:

- goal content specified as aim for activity
- prescriptions for activity to realize the goal
- survey lists to serve as a supplement to present prescription and as preparation for future prescription for activity towards the goal content.

The goal content specifies the characteristics of the situations to be produced. The prescriptions, as explained by Dickoff *et al.* (1968), are the directives for carrying out activity that will produce such situations.

Dickoff (1968) describes the survey list as those factors, facets and aspects of activity judged relevant to achieve situations of the given kind but are not yet conceptually translated into directives for action. Secondly, those theories deemed to enhance the possibility of realizing the goal of the situation-producing theory. The situation-producing theory is often called the "*normative theory*" or "*value theory*" (Dickoff, 1968). This level includes prescriptions of activities essential to reach defined goals (Seaman's, 1987).

Based on the situation-producing theory, it was envisaged to set the following goals for the research study:

a) To determine the health status of the Coloured people of an urban area in the Western Cape as defined.

b) To investigate the prevalence of factors influencing the health status of the Coloured people of an urban area in the Western Cape as defined.

c) To empower the Coloured people to improve their health status through health education

d) To provide guidelines to policy-makers in health services with regard to specific needs of the Coloured people of the Western Cape.

4.5.3 Descriptive Cross-Sectional Design

According to Hennekens (1987) a descriptive cross-sectional study is a type of prevalence survey. The study is conducted over a specific time window among individuals in a well-defined population to assess exposure and disease simultaneously. The purpose of this design is to provide information about the health experience of the population at a specified time.

4.5.4 Reasoning Strategies

The reasoning strategies of induction, deduction, hypothetical-deduction, analysing and interpretation were implemented to factor isolate, factor relate and situation produce the concepts in the investigation into the prevalence of factors influencing the health status of the Coloured people of the Western Cape in an urban setting.

A literature study about factors influencing the health status, health behaviour and health practices of an individual, including theories and models with reference to health, illness and wellness provided deductive material for substantiation.

According to Mouton and Marais, (1992) logic and existing written and proven research may be used. For this study logic and existing written and proven scientific research concerning the factors influencing the health status, health behaviour and health practices of an individual were used.

4.5.4.1 Inductive Reasoning

Inductive reasoning refers to the way in which things observed are explained. It begins with specific observations and moves to construct a more general explanation or theory (Seaman's, 1987).

In recent projects (1996, 1997) carried out by the researcher, she identified that there were many factors influencing the health status of the Coloured people. Some of these factors were the following:

- Poverty
- Poor eating habits
- Low education levels

- Abuse of alcohol and drugs,
- Excessive smoking
- A lack of health education existed among Coloured people.
- Problems with accessibility, availability and affordability of health services.

The researcher isolated these factors and then conceptualised them to become a whole.

A description was made of all concepts, which were then categorized. Subsequently a structured questionnaire based on the researcher's clinical experience and the literature study was designed. The literature study included factors influencing the health status, health behaviour and health practices of an individual, also theories and models with reference to health, illness, and wellness. Based on scientific research, the questionnaire was used in a structured interview to verify and substantiate the prevalence of factors influencing the Coloured people's health status in an urban setting.

4.5.4.2 Deductive Reasoning

Deductive reasoning commonly begins with a theory or general premise and moves toward specific observations. Deduction is data that will be observed as predicted and explained.

By utilizing the deductive method, theory is converted into inter-related propositions and hypotheses (Burns and Grove, 1993; Mouton and Marais, 1992; Seaman, 1987). In the study, the deductive reasoning strategy was employed to extract empirical data from the literature, models and theories in support of identifying the prevalence of factors influencing the Coloured people's health status. This strategy was also employed in chi square tests to determine associations between the various factors influencing an individual's health status.

4.5.4.3 Hypothetico-deductive Reasoning

Many theoretical statements are made in the inductive reasoning strategy and specific observations are substantiated through a literature study in the deductive reasoning strategy.

By using the hypothetico-deductive reasoning strategy, a system of interrelated propositions or hypotheses that predicts what will be observed, is developed (Burns and Grove, 1993; Seaman, 1987).

In this study, hypotheses were developed and were subsequently tested. Data was obtained in a structured interview by the researcher with the help of two registered nurses. A questionnaire was used as a guide during the interview.

The data that was obtained guided the researcher in her investigation about the prevalence of factors influencing the health status of the Coloured people in an urban setting.

4.6 HYPOTHESIS

The researcher believes that at present self-perpetuating problems exist between communities and families who are ignorant about a healthy lifestyle. This impinges on the next generation as behavioural health risks practised in one generation continue into the next generation.

A hypothesis is *"... the formal statement of the expected relationship(s) between two or more variables in a specified population*" (Burns and Grove, 1993).

The hypothesis for this study is based on associations between the health status and the various factors influencing the health status. of the respondents of the target population as decided upon for this study, namely the economically active Coloured people above the age of 21 years and less than or equal to 50 years of age, living in an urban setting in the lower–lying areas of the Cape Metropole in the Western Cape.

According to the research methodologist, Prof J Mouton (U.S., 1998) determining correlations is more accurate than associations. However, in the final analysis, only associations are tested for the purpose of this study. The chi-square statistical test is applied to determine associations of statistical significance between data.

1. HYPOTHESIS: (Ho)

There is no association between the health status of the Coloured people of an

urban area in the Western Cape and other factors such as biographical factors.

HYPOTHESIS (H_1)

There is an association between the health status of the Coloured people of an urban area in the Western Cape and other factors such as biographical factors.

2. NUL HYPOTHESIS (Ho)

There is no association between the health status and the socio-economic status of the Coloured people of an urban area in the Western Cape.

HYPOTHESIS (H_1)

There is an association between the health status and the socio-economic status of the Coloured people of an urban area in the Western Cape.

3. NUL HYPOTHESIS (Ho)

There is no association between the health status and health beliefs of the Coloured people of an urban area in the Western Cape.

HYPOTHESIS (H_1)

There is an association between the health status and health beliefs of the Coloured people of an urban area in the Western Cape

4. NUL HYPOTHESIS (Ho)

There is no association between the health status and ethno-cultural beliefs of the Coloured people of an urban area in the Western Cape.

HYPOTHESIS (H_1)

There is an association between the health status and ethno-cultural beliefs of the Coloured people of an urban area in the Western Cape.

5. NUL HYPOTHESIS (Ho)

There is no association between the health status and religious beliefs of the Coloured people of an urban area in the Western Cape.

HYPOTHESIS (H_1)

There is an association between the health status and religious beliefs of the Coloured people of an urban area in the Western Cape

6. NUL HYPOTHESIS : (Ho)

There is no association between the various factors influencing the health status of the Coloured people of an urban area in the Western Cape

HYPOTHESIS (H_1)

There is an association between the various factors influencing the health status of the Coloured people of an urban area in the Western Cape

7. NUL HYPOTHESIS (Ho)

There is no association between the health status of the Coloured people of an urban area in the Western Cape and their lifestyles

HYPOTHESIS (H_1)

There is an association between the health status of the Coloured people of an urban area in the Western Cape and their lifestyles

4.7 DURATION OF THE STUDY

A literature study was completed before the commencement of the data collection. Literature was drawn from disciplines such as nursing science, medical sociology, sociology, medical sciences, research publications on the various factors influencing the health status, health behaviour and health practice of an individual. The literature study was carried out over a period of one year. The data collection was carried out daily including Saturdays, Sundays, public holidays and at times at night over a period of nine weeks. The total duration of the research project was twenty-four months excluding a preparation time of at least one year.

4.8 VALIDITY AND RELIABILITY

Quantitative research objectivity is an important criterion used to judge the

research. Objectivity is reflected in two parts, namely validity and reliability (Holloway and Wheeler, 1997).

According to Seaman (1987) validity refers to the instrument's ability to measure what it purports to measure. It is also a judgement of the extent to which a component of research reflects the theory, concept or variable that the researcher intends.

Reliability is the extent to which an instrument when used more than once will produce the same results (Holloway and Wheeler, 1997). Others define it as the ability of the data-gathering device, scale or instrument to obtain consistent, accurate and dependable measurements (Seaman, 1987; Treece and Treece, 1986).

Initially the researcher planned to draw a sample of 300 participants as suggested by the research methodologist, Prof. J Mouton (U.S., 1998). A pilot study of 10% (30) of the total number, 300 participants of the sample, was therefore conducted to support the validity and reliability of the study. Interviews were conducted under circumstances similar to the actual study. However, the final composition of the sample was 353 and not 300 as initially planned. This excludes the sample of the pilot study. A minimum of 50 respondents from each suburb was included in the study. In areas where informal settlements were identified, more than 50 respondents were included (Table 4.1).

Experts in research methodology, statistics and computer science programming evaluated the instrument. A nursing science specialist, a sociologist, and the ethical and post-graduate committee of the Faculty of Medicine at the University of Stellenbosch evaluated the content of the instrument.

The validity and reliability of the instrument was further supported by means of a pre-tested health-style self-test (National Health Information, 1995, 2000) about behavioural health risks. The self-test was used to cross check the data already obtained about behavioural health risks. The use of Travis's illness-wellness continuum (1988) was applied to evaluate the health status of an individual.

4.9 ETHICAL CONSIDERATIONS

"A good research problem conforms to moral, ethical and legal standards of scientific inquiry" (Seaman, 1987). The proposal of the research project together with a proposed informed consent document and questionnaire was submitted to the ethical committee of the Medical Faculty, University of Stellenbosch for ethical evaluation. Following the evaluation, corrections were required and thereafter the document was prepared for use.

The researcher intended to obtain written consent from each participant. However, during the pilot study it was observed that much time was taken up in obtaining written consent. Subsequently, participants were given the choice of giving written or verbal consent. Following a full explanation of the research project by the researcher in the participant's language of choice (that is English or Afrikaans), all of them gave voluntary informed verbal consent.

The explanation included the purpose and goals of the study, as well as the duration and content of the interview and objective tests. Details of the objective tests such as the blood glucose and cholesterol levels, the reasons for these tests and how the tests were to be carried out, were given.

Many of the participants voluntarily requested permission from the researcher to be part of the research project. The researcher welcomed this participation and participants were included if they met the prescribed criteria. According to Burns and Grove (1993) *"... People are frequently willing to co-operate with a study if they view the problem and purpose as significant ..."* This was what the researcher experienced during the collection of data for this research project. All participants were assured of their right to confidentiality, anonymity and privacy.

4.10 POPULATION AND SAMPLING

After an in-depth discussion with a renowned international statistician and research methodologist, Prof J Mouton, (U.S., 1998) he recommended that the sample be drawn as follows:

- A survey of the data collection technique
- A sample of 300 participants, with at least 50 participants from each suburb. To reduce the sampling error the size of the smallest unit should not be too

big.

- The suburbs chosen to be well representative of all social classes. The design of the sample should maximize the probability that all social classes are represented.

According to Krejcie and Morgan (1970) a sample of 384 (0,04%) participants is required for a population of one million in any scientific study. In this study a sample of 353 (0,6%) was drawn from a population of 63004.

A total number of 63004 economically active people live in these suburbs (Census, 1996). The 1996 census data was used as a departure point as these areas are dynamic. Factors contributing to this dynamic state are:

(i) people are continuously moving in and out of these areas
(ii) rapid growth of informal housing
(iii) housing projects in progress

Informal settlements were not found in all the areas. Consequently, the researcher increased the number of respondents in those areas with informal settlements. The final number of participants included in the sample was 353, an increase of 53 (17,7%). Due to financial and time constraints, the researcher was forced to stop the data collection after a tally of 353.

Data was collected from predominantly Coloured residential suburbs of the lower-lying geographical area as defined for the purpose of this study. Data was collected in a structured interview by means of a questionnaire in the participant's preferred language of choice (that is English or Afrikaans).

A purposeful stratified sample of 353 participants was drawn randomly. All social classes were well represented in suburbs. At least fifty participants were drawn from each suburb. Statistically this is the least acceptable number of respondents from a residential area to be used in a sample.

The design of the sample maximised the chance that all the social classes were equally represented. The intention was to determine the association between the factors and not to determine the probable size of the different factors in the population. In the final analysis, other statistical procedures such as weighting have been applied to correct the under- representation of a subgroup. In order to widen the probability of including participants of all socio-economic levels, the following

suburbs were decided upon for this study:

- Belhar (14119)
- Bellville South (5303)
- Elsies River (20025)
- Kraaifontein (14427)
- Kuils River (945)
- Ravensmead (8185)

With the help of the town planners of the municipalities concerned, the areas selected were categorized into:

(a) Formal Housing

- Middle to upper income group. It was not possible to categorize this group into only upper or middle-income group as people of both groups are found living in this demarcated geographical area.
- Lower income group

(b) Informal Housing

According to the town planners the suburbs of Bellville South, Belhar and Ravensmead had no informal housing. In consultation with the researcher's promoter it was decided that more participants would be drawn from the three remaining areas, Kraaifontein, Kuilsriver and Elsies River where informal housing was found.

However, informal housing was identified in Ravensmead and Bellville South. According to the researcher's co-promoter, Prof J Groenewald (U.S., 1998) following categorization of the suburbs into middle-upper income areas, low-income areas and informal housing, a random sample of participants from these areas was to be drawn. This was subsequently carried out.

4.10.1 Limitations of the Study

The researcher decided that a more homogeneous sample had to be selected for

the study. According to the literature, there are factors that may influence the health status of an individual over which he/she has no control, for example climate (Kozier, 1995). A limitation of this study is therefore that the sample drawn will not represent the Coloured people per se, as the sample is only drawn from the low-lying geographical area of the Cape Metropole. Therefore, although the term "Coloured population" will be used this limitation exists.

The reasons for selecting a sample only from low-lying geographical area are the following:

- To obtain a more homogeneous sample
- The geographical shape of the low lying areas is that of a flat basin surrounded by mountains, resulting in a difference between the climate of the these areas and the higher lying areas where the air is cleaner and the rainfall much higher (Linno, 1999).
- The Cape Town brown haze occurs mostly during the winter months, from April to September due to strong temperature inversions and windless conditions during these months. Consequently, this leads to a build-up of pollutants emitted into the atmosphere. The haze extends over most of the low-lying area, it is most intense in the morning and then lifts and disperses. The haze has a strong degrading effect on visibility. In urban areas particles less than 2.5 microns in size are the single largest cause of visibility impairment. These are also the most harmful to human health (Wicking-Baird et al., 1997).
- The suburban areas selected are also dominated and surrounded by industries that contribute to the air pollution.
- Areas that have not been included in the study are those lying outside the lower-lying basin.
- Coloured people from rural areas are excluded from the study.

Further limitations that influenced the study were the following:

- The time range that was determined for the completion of the study
- Financial constraints
- The pilot study indicated that many Coloured people older than 50 years had taken early retirement and were therefore excluded from the study.
- Participants 21 years and younger were potentially still at college or university. These participants are still dependent on their parents for their welfare.
- The study was restricted to the economically active adults above 21 years

of age and younger or equal to 50 years of age.

- Crime and animals threatened the safety of the researcher and assistants.
- Interviews were not always conducted under the ideal clinical circumstances, at times literally in the field, in crowded homes, noisy environments and under verandas.
- The middle and upper socio-economic homes were clustered together as one unit because these homes could not be accurately defined as separate clusters.
- Despite the pilot study, biases could affect the study as two field workers despite the training given to them assisted the researcher.
- The use of the cross-sectional survey limits the research to a well-defined population
- "Chicken or egg" dilemma is common to cross-sectional data such as "was the consumption of alcohol caused by unemployment or did unemployment cause the consumption of alcohol".
- Cross-sectional surveys must consider prevalence rather than incident cases
- Cross-sectional surveys can be used to describe characteristics of individuals with disease and to formulate hypotheses, but not to test them.
- Analysis is made on an expost-facto explanation or proof, it is not a causality study.

4.10.2 Criteria for Selection

The following selective criteria were set:

- Participants who identify themselves as Coloured
- Participants who give consent to participate in the research study
- Participants residing in the suburbs as defined
- Participants who are economically active, including workers (employers and employees) in both the formal and informal sectors and persons who are unemployed as defined by the Central Statistics Department.
- Participants older than 21 years but younger than or equal to 50 years of age.
- The house type as categorized (middle to upper socio-economic level, lower socio-economic level and formal and informal housing)
- The sample should include males and females.

4.10.3 The Sampling Design

The sample was drawn from the areas as categorized into house type i.e. middle to upper, lower income and informal housing. The data was collected randomly within these areas. The total number of participants was 353 and analyses of the various areas are as follows:

Residential Area	Formal Housing 256 (72.52%)		Informal 97=27.48 %	N=353
	Middle-Upper Economic 123(34.8%)	Lower Economic 133(37.7%)		
Bellville South	16 (30.2%)	14 (26.4%)	23 (43.4%)	53 (15.0%)
Belhar	29 (58.0%)	21 (42.0%)	0 (0,0%)	50 (14.2%)
Elsies River	17 (21.1%)	39 (48.6%)	24 (30.0%)	80 (22.7%)
Kraaifontein	24 (38.1%)	19 (30.2%)	20 (31.8%)	63 (17.8%)
Kuilsriver	19 (37.3%)	15 (29.4%)	25 (44.6%)	51 (14.4%)
Ravensmead	18 (32.1%)	25 (44.6%)	13 (23.2%)	56 (15.9%)

TABLE 4.1: SHOWING THE ANALYSIS OF THE HOUSE STRUCTURE OF THE RESIDENTIAL AREAS

4.11 THE PILOT STUDY

A pilot study is frequently defined as a smaller version of the actual study to be conducted. These studies are conducted to refine the methodology. It is conducted under similar circumstances as the proposed study using the similar subjects, the same setting and the same data collection and analysis techniques (Burns & Grove, 1993). Treece and Treece (1986) refers to the pilot study as *"... pretesting the research instrument*". Conducting a pilot study is important to the success of an investigation as the effectiveness of the instrument is measured.

In this regard, the researcher conducted a pilot study to pretest the instrument, to refine and clarify the elements that were included in the study. The initial sample planned for the study was 300, the minimum required for a study of this nature. It was then decided to conduct a pilot study of 10% (30) participants. This was

subsequently carried out. The questionnaire was refined, clarified and all ambiguity was eradicated from the instrument following the pilot study.

The final tally of the sample at the end of the data collection however, was 353 and not 300, the pilot study conducted was therefore 8.4% (30) of 353 participants. The pilot study did not form part of the sample of 353 participants.

4.12 DATA COLLECTION

Data was collected in the categorized areas as decided upon in a structured interview with individual participants, using a structured questionnaire. The researcher trained two registered nurses to help with the collection of data. The field workers accompanied the researcher into the field and were guided and supervised by her. At no time did any of the field workers go out alone into the field to collect data. The researcher applied this approach to promote the validity and reliability of the study.

Interviews were conducted in the participant's language of choice, that is English or Afrikaans. The average duration of the interview and completion of the objective tests was approximately 45 minutes. Some interviews lasted longer, especially in cases where respondents had problems of a medical or social nature.

The participants in the lower socio-economic areas were selected as follows:

- The researcher went into the categorised areas and went from house to house. If the likelihood arose that the safety of the researcher and assistants were threatened, such as when dogs threatened to attack the researcher and the field workers or when the house did not look safe to enter, the next house was then taken. On entering a house, the researcher introduced herseld and explained the purpose of her visit. Any persons within a household who met the selection criteria and gave consent to participate in the study, were then included in the research study. The required research was carried out in that particular household or participants were taken to a strategic point such as a church hall, another house or library hall where the research was carried out. This was done in order to save time loading and unloading equipment. Households were selected in a random purposeful method within the areas as defined. If consent was not given, the occupants were not forced to participate, the next household was then taken. A door-to-

door sequence was practised.

- Houses within the middle-upper socio-economic areas posed no threat. These were chosen randomly and the research was carried out in the house of the participant and not at any strategic point.

The participants were selected as described above until the required numbers were reached. The selection procedure was applied strictly according to the selection criteria that were set for the study. The sample included respondents of all social classes, males and females and age groups as defined. However, the aim of the study was not to represent the proportions valid for the population in the sample.

As already described in paragraph 4.10, all areas did not have an informal settlement area. To ensure that all socio-economic groups were represented, the number of respondents in the areas where both formal and informal settlements were found, was increased.

4.13 INSTRUMENTATION

The researcher conducted structured interviews with the assistance of two-registered professional nurses. A pre-tested questionnaire was used for these interviews. Ambiguity and biases were excluded from the questionnaire after the pilot study involving thirty participants had been completed. The questionnaire was then refined, clarified and all ambiguity was eradicated from the instrument.

The questionnaire consisted of 24 pages (See appendix 1). The average duration time of an interview was 45 to 60 minutes. At times the complexity of the problems influenced the duration of an interview.

4.13.1 Design and Content of the questionnaire

After an in-depth study of the literature, the design and content of the instrument was specifically developed for the purpose of the study.

The purpose of the questionnaire was to determine the following:

- The health status of the Coloured people of the Western Cape as defined.
- The prevalence of factors influencing the health status of the Coloured

people of the Western Cape as defined.

- The relationship between the health status and the factors influencing the health status of the Coloured people as defined.
- Associations between the factors influencing the health status of the Coloured people as defined.

The questionnaire was divided into the following ten (10) sections:

→ A: Biographical data
→ B: Social Habits
→ C: Diet
→ D: Exercise, Stress Management and Leisure Time
→ E: Ethno-Cultural Beliefs: Health and Illness
→ F: Religious Beliefs Influencing Health and Illness
→ G: Environmental Factors
→ H: Health Services
→ I: Physical Health Assessment
→ J: Objective Test Measurements and Health-Style: A Pre-tested Self-Test (National Health, 1995, 2000).

The researcher and assistants completed the questionnaire. After posing the specific question, the answer of choice was marked with an "X".

(A) Section A: Biographical Data

This section referred to personal data such as age, gender, and marital status as well as aspects about the individual's socio-economic status. It consisted of questions 1 to17 with 19 variables. The six residential areas as decided upon for the studies were shown in question 1. In this question, the residential area of the respondent was identified.

Question 2 indicated the house structure classification, that is, whether the respondents were living in a formal upper-middle economic house, formal lower economic house, or informal house.

Questions 3, 4, and 5 indicated the respondents' age, gender and marital status respectively.

Questions 6 to 17 referred to the individual's socio-economic status (education, income and occupation).

Questions 6, 7 and 8 specifically referred to the level of education. In question 6 the respondents had to indicate whether they were literate or not. In question 7 the schooling levels were required while in question 8 the level of post schooling education was required.

Questions 9 to 17 referred to the respondents' income and occupation. In question 9 the respondent had to indicate whether he/she was a breadwinner or not. If yes, in question 9, the respondent had to indicate how many dependants he/she had in question10.

Question 11 referred to the number of people who regularly stayed in the dwelling. Questions 12 to 17 made reference to the respondents' employment, type of income if not employed, income levels and of type of occupation.

(B) Section B: Social Habits

Questions 18 to 37 referred to the respondents' social habits, this included the use of alcohol, smoking cigarettes, or equivalent and the use of drugs, legal and illegal.

Questions 18 to 23 referred to the use of alcohol, the type of alcohol that was consumed and whether respondents had a history of alcohol consumption. It also queried whether respondents had received advice if they had stopped taking alcohol and from whom.

Question 24 made reference to smoking, the number of cigarettes smoked per day, if the respondent had a history of smoking and if they received advice about it if they had stopped smoking and from whom.

Questions 30 to 36 referred to the use of drugs whether legal or illegal. Illegal drugs such as marijuana, mandrax were referred to. Legal drugs included medications such as anti-inflammatory drugs and analgesics. Information about the frequency and the amount of drugs taken, also if the respondent had a history of taking drugs was required.

It also queried whether respondents had received advice if they had stopped taking drugs, and from whom.

(C) Section C: Diet

This section consisted of 14 questions, 10 closed-ended and 4 open-ended questions.

Questions 38 and 39 referred to the number of meals consumed per day and the availability of money for meals. Questions 40 to 50 referred to the use and frequency of fresh vegetables, red meat, fish and white meat such as chicken. If the respondents indicated that the use of these foodstuffs was either "seldom" or "never", they had to give their reasons for this in the open-ended questions.

Questions 51 and 52 referred to the use of table salt.

(D) Section D: Exercise, Stress Management And Leisure Time

In this section, reference was made to three aspects of an individual's lifestyle namely, exercise, stress management and leisure time. It consisted of 14 questions, 13 closed-ended and 1 open-ended question.

Questions 53 to 57 made reference to whether the respondents associated good health with exercise, exercised regularly and the frequency and type of exercise. Respondents were also required to indicate their reasons for not exercising.

Questions 58 to 63 referred to stress and stress management. In an open question the respondents were asked to give their understanding of stress. The questions that followed referred to whether the respondents were experiencing stress, the causes of stress and how respondents were managing their stress. Respondents were also required to indicate if they had a support system when stressed and to specify the support system(s).

Questions 64 to 66 referred to whether the respondents had leisure / free time or not, what they did during this time and if the answer was negative, to indicate the reasons for not having leisure time.

(E) Section E: Ethno-Cultural Beliefs: Health And Illness

This section consisted of 7 questions, 4 open-ended questions, and three close-ended questions. In the open-ended questions 67 and 73 the respondents were required to give their understanding of health and illness respectively.

In the open-ended question 68, the respondents were asked whether they had any ethno-cultural beliefs they related to their health and to specify these.

In questions 69 and 70 respondents were required to indicate if they had any objections to receiving any sort of medical treatment and to explain these.

Questions 71 and 72 referred to beliefs about self-medicating any illness before consulting a medical doctor. The respondents were required to indicate the method of treatment in question 72.

(F) Section F: Religious Beliefs Influencing Health and Illness

In this section, reference was made to religious beliefs about health and illness. This section consisted of 5 questions, 3 open-ended, and 2 close-ended questions. In the open-ended questions 74 and 78, the respondents were asked about their religious beliefs concerning health and illness. The respondents were also asked if they had any objections, from a religious point of view, to receiving any medical treatment and to specify these. In question 77 respondents had to indicate whether they had to consult with their religious leader before receiving any medical treatment.

(G) Section G: Environmental Factors

This section consisted of only 2 close-ended questions, numbers 79 and 80. Respondents were required to indicate whether they had any troubling environmental problems influencing their health and to specify these.

(H) Section H: Health Services and Health Status

This section consisted of two parts. In the first part (questions 81 to 89), reference was made to the types of health services the respondents were using, accessibility to health services and affordability. The section consisted of 8 questions, 5 close-ended questions, and 3 open-ended questions. The open-ended questions were linked to the closed-ended questions in which the respondents were to specify, with reasons, why they had given a negative answer.

The second part (questions 90 and 91), were open-ended questions in which the respondents were asked if they had anything to share with the researcher about health and illness.

In this section, the respondents were also asked about their health status. They were required to indicate if they had any health problems and the most common problem that had forced them to see a doctor in the past 5 years.

The respondents were also asked how they rated their health on a scale of 1-10 (Travis's Wellness Continuum, 1987) and give a reason for their rating.

(I) Section I: Physical Health Assessment

Guided by the promoter and ethical committee, this section does not include all the systems of the human body but only those that are more commonly affected.
A checklist for the review of systems therefore made reference to the following:

- General health
- Integumentary System
- Neurological System
- Mouth and Throat
- Breasts (females only)
- Respiratory System
- Cardiovascular System
- Gastrointestinal Tract
- Urinary Tract
- Reproductive System
- Joints
- Endocrine System

- Sleeping Disorders

(J) Section J: Objective Test Measurements and Health-Style: A Self-Test

This section consisted of two parts namely objective test measurements and a health-style self-test. The first part referred to objective measurements that were obtained about the respondent. Tests included the following: (Refer to annexure c for more detail about the tests carried out on the respondents.).

- Blood pressure measurements
- Pulse rate
- Respiration rate
- Haemoglobin
- Blood glucose
- Urinalysis for blood, protein and glucose
- Cholesterol
- Height and mass

4.13.2 The methodology applied for measuring the tests

The objective test measurements were done after the interview and the health assessment. The respondent was made comfortable, the tests were again explained to the respondents, and clarity was given where it was required.

The tests were carried out in the following sequence:

The blood tests for glucose, cholesterol and haemoglobin were carried out first followed by the urine test and lastly the blood pressure, pulse, respiration and the mass and height measurements.

4.13.2.1 Blood pressure measurements

Blood pressure was recorded after the respondent was made comfortable and had rested for five minutes. The validity of the blood pressure measurements was improved by having ensured that the patient had not ingested any caffeine or smoked within thirty minutes before the recording of these measurements. These measurements were done in a sitting position.

(a) Equipment

Blood pressure was measured with an appropriate size blood pressure cuff, the sphygmomanometer and stethoscope

(b) Site

The blood pressure was assessed in either right or left arm of the respondent using the brachial artery and a standard stethoscope.

(c) Method

The auscultatory method was used with the use of the stethoscope and sphygmomanometer, which is required for this method. The deflated cuff was wrapped evenly around the upper arm, which encircled it at least two-thirds. After the brachial artery was located, the centre of the bladder inside the cuff was positioned directly over it. This was to ensure accurate readings from the artery being compressed. The lower border of the cuff was placed approximately 2,5cm above the antecubital space.

The blood pressure cuff was then connected to the sphygmomanometer. The brachial artery was palpated with the fingertips of the left hand of the field- worker and with the right hand the valve on the pump was closed turning it clockwise. The cuff was then pumped up with the right hand of the field worker until the sphygmomanometer registered about 30mmHg above the point where the brachial pulse disappeared.

The stethoscope was positioned with the bell side of the amplifier over the brachial pulse. Followed by a carefully release of the valve on the cuff decreasing the pressure at a rate of 2-3mmHg per second.

The five phases in the series of sounds called Korotkoff's sounds were identified. The field-worker ensured that she identified at least two consecutive tapping sounds within the first phase. The first of these heard during the deflation of the cuff was identified as the systolic pressure. The pressure level of the last sound followed by a period of silence was identified as the diastolic pressure.

The procedure was repeated after 1-2 minutes to make sure of an accurate reading. The measurements were then recorded as normal, below or above normal.

Diastolic blood pressure: normal 70-80mmHg, below normal <70mmHg, above normal ≥ 90mmHg. Systolic blood pressure: normal 110-130mmHg, below normal <100mmHg, above normal ≥140mmHg. A second field-worker (registered nurse) checked all abnormal readings. This procedure was based on the procedure as described by the American Heart Association (1967,1980,1987).

4.13.2.2 Respiration and pulse measurements

The respiration and pulse rates were measured as one procedure. It was done when the patient was relaxed and made comfortable in a sitting position. The radial pulse was recorded followed by the respiratory rate; with the field- worker's hand still on the radial pulse, the respiration was counted. This method was followed to prevent the respondent from manipulating the respiration rate while it was being measured.

A regular pulse rate and respiration rate was counted for 30 seconds and multiplied by 2. An irregular pulse rate or respiration rate was taken for a minute. The pulse measurements were recorded as normal, tachycardia (>100 per minute) and bradycardia (<60 per minute). The respiration rate was recorded as normal, bradypnoea (<10 per minute) and tachypnoea (>20 per minute).

All abnormalities were checked by a second field-worker who was a registered nurse. This procedure was based on the procedure as described by Kozier *et al.* (2000) and Marieb (1998).

4.13.2.3 Urine test

Urine test was done using the Ecur4-Test supplied by Boehringer Mannheim. The test determined the presence of blood, protein, glucose and leucocytes in the urine. A sample of fresh urine was obtained from the respondent in a clean dry glass container. The procedure was carried out as described by Boehringer Mannheim. A dipstick was placed into the urine and removed immediately. The excess urine that may drip from the dipstick was removed by tapping the dipstick on the rim of the glass. After 60 seconds, the readings were obtained by comparing the coloured code on the container with that of the dipstick. The leucocytes were read after 60-120 seconds as recommended. The presence of any of the above was recorded as

"yes" or "no" if absent from the urine.

4.13.2.4 The height and mass measurements

The height and mass of the respondents were recorded as accidental measurements as the time of day was not considered or whether it was before after a meal. This procedure was carried out after all other tests and vital signs had been carried out. The aim of the measurement was to determine whether the respondents were of normal weight, overweight, or underweight.

The tables for desirable weight by Boehringer and Mannheim (1999) based on international trends and not designed for any specific ethnic group were used to determine whether a respondent was of normal weight, underweight or overweight in relation to his / her height. Respondents were weighed without shoes and heavy clothing such as jackets or jerseys. The height was determined without shoes in centimetres

The scale was calibrated before use and set to zero before each respondent's weight was determined.

4.13.2.5 Blood glucose and cholesterol levels

The blood glucose and cholesterol levels were both done on the accutrend GCT apparatus supplied by Boehringer Mannheim. The procedures were carried out as described by Boehringer Mannheim. Two apparatuses were used, one for glucose and the other for cholesterol.

(a) Requirements

- The accutrend GCT apparatus was used to determine the blood glucose and cholesterol of capillary blood. To improve the comfort of the respondent two apparatuses were available so that the respondent was pricked once
- Accutrend test strips for accutrend glucose and cholesterol
- Lancet

(b) Procedure:

- Before use the apparatuses were cleaned thoroughly to ensure no contamination due to previous use.
- Hands of the respondent were washed and dried before the test
- The apparatuses, accutrend GCT were switched on
- The function tests were done before use and depending on the last measurement or calibration the word "gluc." (glucose), or "chol." (cholesterol) appeared. The corresponding code number, the time, and the date appeared below. The word "CODE" blinked and the accutrend GCT was ready for the measurement of calibrated parameters
- A test strip was removed out of its wrapping and containers were closed immediately after removal.
- The test strip was inserted into the accutrend. Once the accutrend GCT had successfully read the test strip two beeps were heard and the name of the type of strip was displayed, either "gluc or chol". Then the code stopped blinking and EV.O began to blink. If an error had occurred the following would appear:E1, E2 or OFF
- If there were no errors, the flap was opened. EV.0 blinked together with the measurement time: for glucose 12 seconds and 180 seconds for cholesterol.
- A fingertip was cleaned with an alcohol preptic swab and left to dry for about 2-3 seconds before pricking it.
- The finger was pricked with a lancet to ensure enough blood for the glucose, cholesterol and haemoglobin tests.
- Without applying much pressure, a blood drop was applied carefully to the yellow test fields of both the cholesterol and glucose test strips without touching the test fields directly with the finger. Enough blood was placed on the test field as to prevent erroneous measurements, for instance low results. A second drop was never applied, in the event that there was too little blood. The procedure was repeated with a new fresh strip.
- The flap was closed immediately after applying the drop of blood. The display now counted down in seconds to 0. During the last four seconds a series of beeps was heard followed by a long beep at the end of the measurement. The measured value in mg/dl or mmol/l appeared on the display and EV.0 blinked.
- The accutrend GCT measures values only within certain ranges:
  Glucose: 1.1-33,3mmol/l)
  Cholesterol: 3,88-7,76mmol/l
- It the readings were above the levels, the meter displayed "HI" or below

these levels, "LO". If too little blood was applied, the meter also displayed "LO", to have ensured that this was not the case, the round window of the test strip was turned over to make sure that it was uniformly covered with blood. If not covered uniformly the test was repeated with a fresh test strip. If an error in the procedure resulted, a message indicating a code error was displayed.

- The flap was opened and strip removed and then cleaned. For glucose measurements, colour comparison test was carried out to check plausibility. The test strip was turned over and the round window colour was compared with the colour circles on the test-strip vial label. The colour in the round window had to roughly match the colour given of the result obtained. If not, a performance check of the accutrend GCT had to be carried out. This problem did not arise during the testing of the respondents. After use the flap was closed and the meter switched off.

(c) Precautions taken with measurements on several people

- The blood was applied to the test strip outside the accutrend GCT to prevent the flap and test strip guide from being contaminated with blood residue.
- The accutrend was disinfected with alcohol after every use to prevent contamination.
- A new lancet was used for each respondent.

The procedures for the tests were carried out with the use of two accutrends GCT apparatuses. The appropriate test strip was used for the specific measurement. No mistakes occurred as the accutrends were calibrated specifically for each type of test either cholesterol or glucose. The accutrend GCT will only respond to the correct strip otherwise it indicates error (Boehringer Mannheim 1999).

4.13.2.6 Haemoglobin

The procedure was carried out as described in the standard procedure manual of the Tygerberg Academic Hospital, Western Cape Province.

(a) Requirements

- Blood lancet

- Alcohol swab
- Haemolysis stick
- Haemoglobin meter with glass slides, namely a cover and room glass
- Clamp for glass slides

(b) Procedure

- Slides cleaned and dried
- The two slides were clamped but the cover glass was shifted so that one half of room glass was opened.
- The respondent's finger was cleaned with an alcohol swab and after the alcohol had dried, a finger prick was carried out to ensure enough blood for the haemoglobin, glucose and cholesterol tests. Three drops of blood were retrieved from one finger prick. A drop of blood was dropped onto the room glass without applying pressure to the finger.
- The blood was haemolysed with the haemolysis stick until the blood was of a bright red colour and transparent.
- The cover glass was then shifted over the room glass with the haemolysed blood.
- The clamped glass slides were placed within the blood chamber of the haemoglobin meter.
- By holding the haemoglobin meter with the left hand and switching on the light with the left hand, the sliding meter was slid up or down until the green colour on the left matched the green colour on the right.
- The haemoglobin reading was read on the scale above the sliding meter.
- A second field worker, who was also a registered nurse, checked the reading.
- The readings were then recorded as normal, above or below normal.
  The following measurements were used as a guide:

  Females : Normal 12-16gm/dl
  Below normal < 12gm/dl
  Above normal > 16gm/dl

  Males : Normal 14-18gm/dl
  Below normal <14gm/dl
  Above normal >18gm/dl

  (Marieb, 1998; Tygerberg Hospital, 1999).

The second part of the questionnaire consisted of a health-style self-test. The test

emphasised 6 behaviours that contributed to lifestyle, namely:

- Cigarette smoking
- Alcohol and drugs
- Eating habits
- Exercise and fitness
- Stress control
- Safety

The test was completed to support the validity and reliability of the study.

It was also completed to make the respondents aware of the following:

- good health habits that were being practiced
- where room for improvement was needed
- where changes were needed
- where behavioural health risks were apparent

The questionnaire was refined and coded for computerised analysis.

SECTION	Questions: Close-Ended	Questions: Open-ended
A: Biographical data	1-17	
B: Social Habits	18-37	
C: Diet	38-52	
D: Exercise, Stress Management and Leisure Time	53-57;59-66	58
E: Ethno-Cultural Beliefs: Health and Illness	69; 71; 72	67; 68; 70; 73
F: Religious Beliefs Influencing Health and Illness	75; 77	74; 76; 78
G: Environmental Factors	79; 80	
H: Health Service and Health Status	81; 82; 84; 86; 87; 92; 94;	83; 85; 88; 90; 91; 93; 95; 96
I: Physical Health Assessment	1-14 systems	
J: Objective Test Measurements and Health-Style: A Self-Test	Part 1: 1-9; Part 2: A-F	

TABLE 4.2 SECTIONAL CONTENT OF THE QUESTIONNAIRE

4.14 DATA ANALYSIS AND INTERPRETATION OF QUALITATIVE AND QUANTITATIVE DATA

Assisted by a statistician and computer science expert, the researcher analysed the quantitative data by means of a computer programme, the SAS (Statistical Analysing System).

The qualitative data was analysed manually. Data obtained in all open-ended questions was studied for common themes and then quantified into categories. The frequencies with which these themes occurred was noted and percentages were calculated. Associations between the themes, the health status, and various other variables were also calculated.

The following types of statistical tests were applied in the analysis of the quantitative data:

- Descriptive statistics
- Inferential statistics
- Chi square test for statistical significance

Descriptive statistics is the type of statistics used to describe and summarize data. Examples of measurements used in descriptive statistics are percentages and measures of central tendency namely, mean, mode and standard deviation.

Inferential statistics may be used to "*infer*" things about a population from the sample that has been studied. Inferential statistics is used when there is a wish to generalize research findings from a sample of a given population to the whole of that population.

For the purpose of this study, the use of the chi-square test is used to test the hypotheses set for the study.

Hypothesis testing involves conducting a test of statistical significance and quantifying the degree to which the sampling variability may account for the results observed in the study.

This test is used for discrete data. It is the most common and simplest statistical method used to determine whether observed differences in proportions between groups, are statistically significant (Hennekens, 1987). The chi-square tests are

used to determine whether there are associations between the factors influencing the health status of the Coloured people as defined. The chi-square test, a test for significance is used to quantify the degree to which chance variability may account for the results observed in any individual study. The *p*-value is the measure reported from all tests of statistical significance. It is defined as the probability that an effect at least as extreme as that observed in a particular study could have occurred by chance alone, given that there is no relationship between exposure and disease. By convention, in medical research if the *p*-value is less than or equal to 0,05, there is no more than 5% probability of observing a result as extreme as that observed due solely to chance, the result being statistically significant. If the p-*value* is greater than 0.05 by convention the chance cannot be excluded as a likely explanation and the findings are stated as not statistically significant at that level (Hennekens, 1987). Therefore, the 95% confidence interval will be applied to determine the significance level between factors influencing the health status of the Coloured people as defined in the study. The confidence interval can provide information about whether a *p*-value is significant or not.

The analysis and the interpretation of data were completed with the assistance of a statistician. The findings were interpreted in relation to the hypotheses and objectives set for the study.

The process of data analysis is characterised by refining, clarifying, and sharpening of statements, concepts and theories found in the literature (Langley, 1993). The raw data is examined for completeness and accuracy. The analysis depends on the research design method of sampling. Data obtained is categorized by content analysis and various processes are used to analyse and interpret the categories and processes such as frequencies and percentage calculations (Seaman, 1987). According to Burns and Grove, (1993) the results of the statistical analysis alone are inadequate in order to complete the study. For the results to be useful, evidence from the data analysis needs to be carefully examined, organized and given meaning. Both statistical and clinical significance need to be assessed. This process is referred to as interpretation.

4.15 CONCLUSION

In this chapter, the researcher describes the methodology of the study. The various steps of the research process as applied in the study are discussed. This includes

the research design, the hypotheses, sampling, data collection, ethical considerations, instrumentation, reliability and validity.

According to Sweeney and Olivier, (1981) researchers should be critical in their thinking abilities and their creative talents for viewing results in various ways.

CHAPTER 5

ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

In this chapter the researcher proceeds to describe the analysis and the interpretation of the data obtained in this study which was of a quantitative and qualitative nature. The analysis and interpretation of the data obtained are presented simultaneously.

5.2 SECTION A: BIOGRAPHICAL DATA

This section refers to personal data as well as questions pertaining to the participant's socio-economic status. It consists of questions one to seventeen with 19 variables.

According to Kozier *et al.,* (1995) there are factors which influence the health status of an individual over which the person has no control, such as age and gender. Likewise, there are factors that an individual is able to control such as occupation, educational level and diet.

Variable 1: Residential Areas

Question 1 refers to the six residential areas from which the sample was drawn. These areas are well representative of all socio-economic classes. Because of time and financial constraints, at least 50 respondents were drawn from each suburb. Statistically this is the least acceptable number of respondents from a residential area to be used as a sample. The sample consists of 353 respondents. Table 5.1 shows the number of respondents from each area.

TABLE 5.1: RESIDENTIAL AREAS (N=353)

	Sample		Population	
	N	%	N	%
Bellville South	53	15,0	5303	8,4
Belhar	50	14,2	14119	22,4
Elsiesriver	80	22,7	20025	31,7
Kraaifontein	63	17,8	14427	23,0
Kuilsriver	51	14,4	945	1,5
Ravensmead	56	15,9	8185	13
TOTAL	**353**	**100,0**	**63004**	**100**

Variable 2: House Structure Classification

Question 2 refers to the type of house the respondents are living in. With the help of the town planners of the municipalities concerned the residential areas were categorized into:

- Formal: Upper-middle-economic
- Formal: Lower economic
- Informal

The house structure determines the socio-economic level of a particular area and was thus used as criteria for selection, paragraph 4.10.2. The analyses of the socio-economic level of the respondents are shown in table 5.2. The socio-economic status (income, occupation and education) is a major factor that may influence an individual's health status as referred to in paragraph 3.2. (Uitenbroek *et al.*, 1996). The sample shows that all social classes of people are represented as defined in the list of definitions, paragraph 1.5.1. Findings obtained about education, income and occupation are discussed in 5:3.

TABLE 5.2: HOUSE STRUCTURE CLASSIFICATION (N=353)

	N	%
Formal: Upper-middle-economic	123	34,8
Formal: Lower economic	133	37,7
Informal	97	27,5
TOTAL	**353**	**100,0**

Variable 3: Age

The age range of the respondents is older than 21 years but younger or equal to 50 years. Only economically active people were included in the study. According to the Central Statistics Department, (1996) economically active people included employers and employees in both the formal and informal sectors and persons who are unemployed.

It was identified in the pilot study that many people are retired after the age of 50 years due to early retirement offered in the public and private sectors. Table 5.3. shows the analysis of the age groups. Inferences may be made between the findings pertaining to these age groups and those of the general population of this specific group living in these suburbs.

TABLE 5.3: AGE RANGE OF RESPONDENTS (N=353)

	Sample		Coloured Population of the Suburbs (Census:1996) 63004 / %	
	N	%	N	%
Between 22-30 years	122	34,6	26602	42,2
31-40 years	134	38,0	23330	37,0
41-50 years	97	27,4	13072	20,7
TOTAL	**353**	**100,0**	**63004**	**100,0**

Variable 4: Gender

Respondents included in the study had to be of both gender groups. It was however, not possible to obtain an equal number of males and females. The researcher identified that males were reluctant to participate in research projects that included questions about their health and medical tests. Consequently, 142 (40,2%) of the sample are male and 211 (59,8%) are female. Table 5.4. shows an analysis of the gender groups. Despite the specific selection criteria set for the study, a gender analysis of the population at large shows that inferential statistics

can be applied as seen in table 5.4. The table shows the total population for this age group including the economically and non-economically active people.

TABLE 5.4: GENDER (N=353)

	Sample		Coloured Population of the Suburbs: Age group 22-50 years (Census:1996) N=81044 / %	
	N	%	N	%
Male	142	40,2	37707	46,5
Female	211	59,8	43337	53,5
TOTAL	**353**	**100,0**	**81044**	**100,0**

Variable 5: Marital Status

An analysis of the marital status of the respondents is shown in table 5.5. The majority of respondents are married and living with their spouses, 189 (53,0%). Only 5 (1,4%) are widow or widowers. The table also shows an analysis of the total marital status of the Coloured population of the suburbs as defined for the purpose of this study.

TABLE 5.5: MARITAL STATUS (N=353)

	Sample		Coloured Population of the Suburbs (Census:1996) N=187268 / %	
	N	%	N	%
Single	109	30,9	118346	63,2
Married	187	53,0	53926	28,8
Living together	24	6,8	3386	1,8
Divorce / separated	28	7,9	4936	2,6
Widow / widower	5	1,4	6674	3,6
TOTAL	**353**	**100,0**	**187268**	**100**

Variable 6: Literacy Rate

According to Uitenbroek *et al.* education is related to social position, occupation and living circumstances which are all predictive of health status. Similar results were obtained in this study as indicated in table 5.8.

It is identified in the study that only 15 (4,2%) of the respondents indicated that they were illiterate, as shown in table 5.6 while 95,8% are literate, (they were able to read and write), a positive aspect relating to the Coloured people. However, illiteracy is defined by the Central Statistical Department (2000) as any person aged 15 years and over with less than seven years of formal schooling, up to and including grade 6. As shown in table 5.7 a large percentage of respondents 85 (24,1%) only have schooling from grade 1 to grade 7.

TABLE 5.6: LITERACY RATE (N=353)

	N	%
Yes	338	95,8
No	15	4,2
TOTAL	**353**	**100,0**

Variable 7: Level of Education: Schooling

Table 5.7 shows an analysis of the levels of schooling. Despite the fact that only 4,2% indicated that they are not able to read and write as shown in table 5.6. a large percentage of respondents 85 (24,1%) only have schooling from grade 1 to grade 7 as shown in table 5.7. The illiteracy rate of the respondents is therefore much higher than 4,2%, namely 9,5% if the definition of the Central Statistical Department (2000) is applied.

The data obtained for grade 1 to 7, (24,1%) is supported by that obtained in a study by Hirschowitz and de Castro (1998) who identified 28,0%.

Respondents with no schooling and schooling up to grade 7 were identified as 31% by Hirschowitz and de Castro (1998) and in this study the figure was identified as 27,8%.

The study shows that there is an association between health problems and the level of education as discussed later in this section.

TABLE 5.7: LEVEL OF EDUCATION: SCHOOLING (N=353)

	N	%
No schooling	13	3,7
Grade 1 to Grade7	85	24,1
Grade 8 to grade 10	140	39,7
Grade11 to grade 12 or equivalent Qualification	115	32,6
TOTAL	**353**	**100,0**

Variable 8: Highest level of Education: Post-Schooling

The data analysis shows that the majority of the respondents have no post-schooling education, 261 (73,9%), which includes respondents with grade 11 and grade 12, or an equivalent qualification, 7(2,0%) hold a university degree and only 3 (0,8%) have obtained postgraduate education. This can be attributed to the inequalities of the past as described in paragraph 3.3. "*... the country exhibits major disparities and inequalities resulting from previous policies which ensured racial, gender and regional disparities*" (Department of Health 1995). Uitenbroek *et al.* (1996) shows in a study of three cities, a higher socio-economic level that includes education is related to a better health status and better health lifestyle behaviours.

Tables 5.8 and 5.9. show an analysis of post-schooling education. In table 5.9. a breakdown of courses mentioned under "*other*" is shown. These courses are all certificate courses.

The study shows that there is an association between health problems and the level of education. There were more respondents identified with health problems among respondents who have low levels of education, in comparison to those who have higher levels of education. The association between the education level (schooling) and health problems is statistically significant (p=0,037). The highest incidence are among those without any schooling (69,2%) followed by grade 1 to grade 7 (67,06%) and then grade 8 to grade 10 (55,7%).

It is further identified that respondents with lower levels of education are more likely to smoke and consume alcohol than those with higher levels of education. The following data shows:

The association between smoking and level of education (schooling) is statistically significant (p=001) and those with post or no post schooling education (p=0,001). The highest incidence of respondents who have a history of smoking are among respondents who have schooling between grade 1 to grade 7 (77,7%) followed by grade 8 to grade 10 (70,0%) and grade 11-12 (23,9%). The highest incidence of respondents who have a smoking history are those without post-schooling education (69,4%). The association between alcohol consumption and the level of education is statistically significant (p=0,030). The highest incidence of respondents who consume alcohol have no post schooling education (42,2%)

TABLE 5.8: HIGHEST LEVEL OF EDUCATION: POST-SCHOOLING (N=353)

	N	%
No post-schooling education	261	73,9
College diploma	56	15,9
University degree	7	2,0
Post graduate qualification	3	0,8
Other	26	7,4
TOTAL	**353**	**100,0**

TABLE 5.9: HIGHEST LEVEL OF EDUCATION: POST- SCHOOLING; OTHER (N=26)

	N	%
Nursing Assistant	1	3,8
Computer Course	3	11,5
Military Course	2	7,7
Cooking	2	7,7
Technical	12	46,2
Secretarial	1	3,8
Security	2	7,7
Educare	3	11,5
TOTAL	**26**	**100,0**

Variable 9: Breadwinners

Table 5.10 shows the number of breadwinners, 163 (46,2%). The financial burden escalates when a respondent has dependants. The number of breadwinners, N=163 who are unemployed are 82 (50,3%).

It is furthermore alarming to note that of the respondents who are unemployed and have no income N=52, 19 (36,5%) are breadwinners. The health status is affected by a low income as discussed later in this chapter.

TABLE 5.10: BREADWINNERS (N=353)

	N	%
Yes	163	46,2
No	190	53, 8
TOTAL	**353**	**100,0**

Variable 10: Number of Dependants

Table 5.11 shows an analysis of the number of dependants. The number of dependants may also affect the economic circumstances of a family. A significant number 43 (26,4%) of respondents who are breadwinners have four or more dependants to care for. This is a concern as the monthly income of the majority 253 (71,7%) of the respondents is R3000 and less. The number of respondents earning less than R1500 is 173 (49%) as shown in this section, variable 18.

TABLE 5.11: NUMBER OF DEPENDANTS (N=163)

	N	%
One	32	19,6
Two	47	28,8
Three	41	25,2
Four and more	43	26,4
TOTAL	**163**	**100,0**

Variable 11: Number of people regularly staying in the dwelling

The maximum number of people found living in a house consisting of two bedrooms, a kitchen, and dining room was 18 and the minimum number was one person living in a room. 54,1% of the respondents indicated that they are four persons or less in a household. A further 39,7% indicated that they are between five and eight persons in a household. Only 6,2% are between nine and eighteen persons per household.

According to the Slums Act 76 of 1979 (Vlok, 1991) any room, which does not allow 12 cubic meters of free air space and 4 square meters of floor space for each person over the age of 10 years sleeping in the room, is considered as a "*nuisance*".

The mean obtained for the number of people regularly staying in the dwelling for the total group of 353 respondents is five, and the standard deviation 2,5. Table 5.12 shows the number of households per area, as well as the number of dependants according to the different house structure classifications, the minimum, maximum, mean and standard deviation of all the persons regularly staying in the dwelling by area at the time of the research.

Respondents of middle-upper socio-economic level are living in houses with a minimum of three bedrooms, while those of the lower socio-economic level (formal housing) live in houses with a maximum of two bedrooms. Respondents living in informal housing, "shacks" only had one bedroom.

It is a concern that there are dwellings in which there is much overcrowding. In one household, it was identified that the parents together with 8 children slept on one double bed. The researcher found this to be impossible, but was convinced by the father that it was true. A second example of overcrowding was seen in a "shack", the bedroom was approximately nine square meters in which the parents and five children slept. Three of the children were at school with an age range of between 7 and 11 years, and two preschoolers.

TABLE 5.12: HOUSE STRUCTURE CLASSIFICATION BY AREA (N=353)

Classification		NUMBER OF PEOPLE REGULARLY STAYING IN DWELLING				
		Total	Min	Max	Mean	Std. Dev.
Formal: Upper middle	16	65	2	5	4,1	0,8
Informal: Lower economic	14	92	4	13	6,6	2,4
Informal	23	97	2	7	4,2	1,6
Bellville South	**53**	**254**	**2**	**13**	**4,8**	**1,9**
Formal: Upper middle	29	130	1	8	4,5	1,6
Informal: Lower economic	21	88	1	12	4,2	2,5
Informal	0	0	0	0	0,0	0,0
Belhar	**50**	**218**	**1**	**12**	**4,4**	**2,0**
Formal: Upper middle	17	82	3	8	4,8	1,6
Informal: Lower economic	39	251	1	17	6,4	3,6
Informal	24	113	2	14	4,7	2,8
Elsiesriver	**80**	**446**	**1**	**17**	**5,6**	**3,1**
Formal: Upper middle	24	116	2	8	4,8	1,5
Informal: Lower economic	19	139	2	16	7,3	3,9
Informal	20	81	1	10	1,9	1,3
Kraaifontein	**63**	**336**	**1**	**16**	**5,3**	**2,9**
Formal: Upper middle	19	86	2	7	4,5	1,4
Informal: Lower economic	15	66	1	7	4,4	1,8
Informal	17	55	1	7	3,2	1,8
Kuilsriver	**51**	**207**	**1**	**7**	**4,1**	**1,7**
Formal: Upper middle	18	73	2	6	4,1	1,2
Informal: Lower economic	25	136	3	18		3,1
Informal	13	59	2	7	4,5	1,5
Ravensmead	**56**	**268**	**2**	**18**	**4,8**	**2,3**

Using the information shown in table 5.12 the following calculations were made: the average sleeping space per person living in an upper-middle economic dwelling, calculated at $9m^2$ per person. Therefore it can be concluded that there is no overcrowding at this level of the society. However, the average sleeping space per person living in a formal lower economic level dwelling is $3,7m^2$, this

indicates overcrowding at this socio-economic level. The sleeping space per person living in an informal economic level dwelling is only 2,7m^2. Therefore, much overcrowding occurs in these dwellings.

The researcher further identified that the overcrowding was aggravated by squalid conditions that contributed to poor health as described by Kozier *et al.*, (1995) in paragraph 3.5.

Variable 12: Employment Rate

As shown in table 5.13 it is disturbing to note that 201 (56,9%) of the respondents are unemployed in contrast to 152 (43,1%) who are employed. The number of breadwinners, N=163 who are unemployed is 82 (50,3%).

According to Lahelma *et al.* (1997), the unemployed tend to have a poorer health status than their employed counterparts, consequently the unemployment rate may have a direct effect on the health status of the population. According to Bartley, (1994) job-loss is highly stressful, characterized as a form of bereavement. Stress affects physical health further down the line because of chronically increased levels of anxiety. The unemployed tend to be heavier smokers and drinkers.

Validated in this study, the majority of the respondents who smoke, N=188: 120 (63,8%) of the smokers are unemployed; and the majority of the respondents who consume alcohol, N=155: 92 (59,4%) are unemployed. An association is observed, between these factors, causality is not being claimed.

According to McLeod, (1982) an employee is defined as someone who is hired to work for another in return for money. Central Statistical Department (2000) defines the unemployed as those people within the economically active population who:

(a) did not work during the seven days prior to the interview
(b) want to work and are available to start work within a week of the interview
(c) have taken active steps to look for work or to start some form of self-employment in the four weeks before the interview.

In this study, the researcher adds to this definition and regards the self-employed

in this sample as being unemployed as these respondents were not of the higher business categories or persons who employ others. They were unemployed and attempted to earn a living by doing unskilled tasks on a daily basis for example selling scrap metal, paper, vegetables, and fruit. For these respondents it was a question of survival.

TABLE 5.13: EMPLOYMENT RATE (N=353)

	N	%
Yes	152	43,1
No	201	56,9
TOTAL	**353**	**100,0**

Variable 13: Source of income if unemployed

Table 5.14 shows an analysis of the source of income of respondents if unemployed.

It is depressing to note that of the respondents who are unemployed, 52 (25,9%) of the respondents, N=201 have no source of income. It is further alarming to note that of the respondents who are unemployed and have no income, 19 (36,5%) are breadwinners.

The researcher identified that the respondents with no income are dependent on asking others for food. In one particular household, the mother sits at supermarkets waiting to pick-up old vegetables and fruit that are thrown away. Many have to scratch in dirt bins for food.

A male respondent explained that many of them are forced to commit a crime and steal for survival *"... that is why the jails are so full of Coloureds"*.

It is a concern that of the respondents who are unemployed and receive no financial income, N=52: 32 (61,5%) smoke and 22 (42,3%) consume alcohol.

TABLE 5.14: SOURCES OF INCOME IF UNEMPLOYED (N=201)

	N	%
Yes	149	74,1
No	52	25,9
TOTAL	**201**	**100,0**

Variables 14, 15, and 16: Sources of financial income if unemployed

A further analysis shows the source of income respondents have if unemployed. Tables 5.15 and 5.16 shows the sources of income of respondents who are unemployed, but do have a source of financial income.

Table 5.15. shows that a significant number of unemployed respondents with a source of financial income, 20 (16,3%) are financially dependent on child maintenance from the state or money from the boyfriend. While it is socially acceptable for a husband or wife to depend on each other for support, it is a concern that young single mothers are entirely dependent on a maintenance grant from the state or money from a boyfriend, to support their children. The researcher identified that these mothers do not even attempt to seek employment to improve their standard of living. They merely wait every month for their maintenance grant. They stated that if it were not for the grant they got for the children, they would have no income. The researcher then further identified that this grant was not only used for the child or children, but also to provide a living for the mother concerned. This included the purchasing of cigarettes and alcohol.

TABLE 5.15: SOURCES OF FINANCIAL INCOME (N=149)

	YES RESPONSES	
	N	%
Disability grant	21	14,1
Work Pension	5	3,4
Other	123	82,5
TOTAL	**149**	**100,0**

TABLE 5.16: SOURCES OF FINANCIAL INCOME: OTHER (N=124)

	YES RESPONSES	
	N	%
Casual/Char	22	17,7
Child maintenance	21	17,0
Family and friends	14	11,3
Investment interest	3	2,4
Self-employed: (Selling scrap metal, paper, vegetables, fruit, games)	19	15,3
Spouse (Husband and Wife)	40	32,3
Unemployment fund	5	4,0
TOTAL	**124**	**100,0**

Variable 17: Income

Table 5.17 shows the times when respondents receive their financial income, whether a state grant, wages, salaries, or any other income. The majority of the respondents,183 (51,8%) receive their financial income monthly, while 52 (14,2%) receive no income. The value of knowing the times respondents receive their wages / salaries, gives the researcher an indication of the expected number of binge drinkers during these times. This study has shown that the majority of those respondents who drink alcohol, binge drink as described in paragraph 5.4. The researcher also identified that respondents who drank alcohol did so when they received money. This data enables the service providers such as the medical emergencies, hospitals, and traffic departments to plan more pro-actively, by as having enough staff on duty to manage an increase in crime, physical assaults and motor vehicle accidents. The abuse of alcohol as described in paragraph 3.1 is associated with conflict.

The association between employment and the respondents who have a history of smoking, is statistically significant (p=0,007), among the employed 56,2% have a history of smoking and among the unemployed 61,9%.

TABLE 5.17: INCOME (N=353)

	N	%
Weekly	92	26,1
Biweekly	8	2,3
Monthly	183	51,8
Daily	18	5,1
No financial Income	52	14,7
TOTAL	**353**	**100,0**

Variable 18: Range of Income per month

Table 5.18 shows an analysis of the ranges of income of respondents, whether employed or unemployed but who have a source of income. The majority, 251 (71,1%) earn less than R3000 per month. It is of further concern to note that of the sample N=353, 52 (14,7%) respondents have no income. The study also shows that the income of a respondent is not necessarily related to the level of education. In the study N=353, respondents 2 (0,8%) without post-schooling education have a monthly income of more that R7501, that is 20% of 10 respondents who receive more than R7501 per month. The results further show that of the respondents who have a college diploma, 7 (43,8%) and of those who hold a university degree 4 (25,0%) receive an income between R4501-6000.

TABLE 15.18: RANGE OF INCOME (N=353)

	N	%
Less than R1500	173	49,0
Between R1501 and R3000	78	22,1
Between R3001 and R4500	20	5,7
Between R4501 and R6000	16	4,5
Between R6001 and R7500	4	1,1
More than R7501	10	2,8
Not applicable	52	14,7
TOTAL	**353**	**100,0**

Variable 19: Occupation

As described in paragraph 3.4 the components of an individual's standard of living are reflected in occupation, income and education level. These components are referred to as the indicators of socio-economic status (Kozier *et al.*, 1995; Clark *et al.*, 1995). Socio-economic status is closely related to health, morbidity and mortality (Clark *et al.*, 1995; Kozier *et al.*, 1995; Lahelma *et al.*, 1997; Lynch *et al.*, 1997; Mackenbach and Kunst, 1997; Uitenbroek *et al.*, 1996; Wannamethee *et al.*, 1995). Substantiated by Paradis *et al.* (1995) populations of low socio-economic status have a higher prevalence of cardiovascular disease risk factors, higher rates of cardiovascular disease morbidity and mortality, than populations of higher socio-economic status. Findings obtained in the project (1996) on the farm labourers, show that 50% of the adults who were referred to a doctor were hypertensive. Systolic pressure varied between 150-230mmHg, and diastolic between 100-130mmHg (see paragraph 3.3).

Occupation refers to the type of work respondents normally do when they are employed.

Tables 5.19 and 5.20 refer to the types of occupation of the respondents. Table 5.19 show that 81 (22,9%) of the respondents, N=353 are labourers and that a large percentage (151) 42,8% responded to "other". A further analysis of these occupations under "*other*" is shown in table 5.20.

It is a concern to note that the majority of the respondents as shown in table 5.19 are unskilled workers, namely 67 (44%) of respondents are employed as domestic and general assistants, 31 (20,5%) are employed as factory workers. Unskilled workers are associated with low levels of education. It has been identified in the study that there is an association between the level of education and health problems of an individual.

Therefore of the sample N=353, only 140 (39,7%) are skilled workers, while 190 (53,8%) are unskilled workers. Skilled workers are associated with a higher income, as identified in the study. Only 10 (2,8%) of the respondents earn more than R7500 per month, of which 6 (60,0%) are professional workers. Professionals earn predominantly between R4501 and more than R7500 per month. To illustrate this further, of the labourers, N=82, 56 (69,1%) earn less than R1500 per month. As described above and validated in this study (see paragraph

5.3, section B) respondents associated with a lower socio-economic level are more prone to have health problems than those of a higher socio-economic level.

TABLE 15.19: OCCUPATION (N=353)

	N	%
Professional	38	10,8
Technical	17	4,8
Clerical	37	10,5
Tradesman	21	5,9
Labourer	81	22,9
Other	151	42,8
Disabled	8	2.3
TOTAL	**353**	**100,0**

TABLE 15.20: OCCUPATION: OTHER (N=151)

	N	%
Domestic and general assistants	67	44,4
Factory workers / machinists	31	20,5
Housewives	15	9,9
Assistants: Nursing, Library, Shop, Pre-school, and Crèche.	22	14,6
Self-employed: selling houses (1), scrap metal and paper (7),vegetables and fruit (2) games (1)	11	7,3
Drivers	5	3,3
TOTAL	**151**	**100,0**

In conclusion, the majority, 251 (71,1%) earn less than R3000 per month, 49,0% earn less than R1500 per month It is further a concern to note that of the sample N=353, 52 (14,7%) respondents have no income.

In addition, the majority of the respondents have no post-schooling education, 261 (73,9%) and the majority are unskilled workers. Consequently, the majority of the respondents are of a lower socio-economic level making them more prone to health problems as described above.

This study further shows that a higher socio-economic level, which included education, is related to a better health status and better health lifestyle behaviours. Education is related to social position, occupation and living circumstances, all predictive of health status.

5.3 SECTION B: SOCIAL HABITS

In this section, questions 18 to 37 refer to social habits namely the consumption of alcohol, smoking and the use of legal and illegal drugs. It consists of 20 questions and 39 variables.

Variable 20: Do you have a history of taking alcohol?

Table 5.21 shows an analysis of the number of respondents who have a history of taking alcohol, 228 (64,6%) and those that have never taken alcohol, 125 (35,4%).

TABLE 5.21: DO YOU HAVE A HISTORY OF TAKING ALCOHOL (N=353)

	N	%
Yes	228	64,6
No	125	35,4
TOTAL	**353**	**100,0**

Variable 21: If "YES" to question 18, do you still take alcohol?

Table 5.22 shows a decline of 32% in the number of respondents who no longer consume alcohol. This is an optimistic and encouraging aspect in the population, if a trend of this nature continues, it will ultimately have a positive effect on the health status of the population.

However, the study identified that 88 (62,0%) males (N=142) and 67 (31,8%) of the females (N=211) consume alcohol.

TABLE 5.22: IF "YES" TO QUESTION 18, DO YOU STILL TAKE ALCOHOL? (N=228)

	YES RESPONSES	
	N	%
Yes	155	68,0
No	73	32,0
TOTAL	**228**	**100,0**

Variable 22. If "YES" to question 19, when do you consume alcohol?

Table 5.23 shows the times when alcohol is consumed. The highest amount of alcohol is consumed over a weekend, 85 (54,8%). Binge drinking, which has an immediate negative effect on the individual is practised. The literature confirms that after binge drinking, an individual, may vomit, become dizzy, develop impaired mental capabilities and a hangover. Alcohol consumed in this manner also has long-term effects on the body (http://www.worldonline.co.za).

The researcher identified that respondents who drank alcohol over weekends had an excess amount of alcohol per day. The United States of America, Department of Agriculture's Dietary Guidelines for Americans does not recommend any drinking. If an individual chooses to drink, the drinks should be limited to two; no more than one drink for females and two drinks for males per day (http://www.worldonline.co.za). A standard drink consists of 15ml of alcohol that is equivalent to 30ml of 100-proof distilled spirits such as whiskey or vodka, or 120ml of table wine. Generally, the body is able to metabolise this amount of alcohol within an hour. Metabolism depends on the size of the body, the bigger you are, the more blood is available to dilute the alcohol. Metabolism is, however also affected by the amount consumed and how fast the alcohol is consumed (http://www.worldonline.co.za). The abuse of alcohol influences the health status of an individual.

Unhealthy lifestyle behaviours referred to as high-risk behaviours such as smoking, the consumption of alcohol and use of drugs, no exercise, may influence the individual's health negatively (Brunner and Suddarth, 1996; Kozier *et al.*, 1995; Uitenbroek *et al.*, 1996).

The Arrive Alive – Don't Drink and Drive campaign, Department of Transport

recommends a blood alcohol content (BAC) of not more than 0.08gm (0.8mg%) alcohol per 100ml of blood when driving (Department of Transport, 1998). However, 0.05mg % may already give an individual a "mellow buzz" and according to the literature 0.5mg% and higher may even cause death (http://www.worldonline.co.za).

A re-evaluation of the BAC is required, as a difference exists between the recommended blood alcohol content for South African drivers when driving and the literature. This study has identified that there are 8(8.7%) of the drivers N=92 that never avoid driving under the influence of alcohol (Table 5.194). Driving under the influence of alcohol can cause the deaths of many persons.

TABLE 5.23: IF "YES" TO QUESTION 19, WHEN DO YOU CONSUME ALCOHOL? (N=155)

	N	%
Daily	12	7,7
Weekends	85	54,8
Socially	52	33,6
Rarely	6	3,9
TOTAL	**155**	**100,0**

Variables 23, 24, 25, and 26: If question 20 is applicable, what type of alcohol do you consume?

The types and amounts of alcohol respondents consume per day is shown in Tables 5.24, 5.25 and 5.26. The variable "other" had no response.

The majority of respondents who are consuming alcohol consume beer, 137 (88,3%) of which 82 (52,9%) consume more than a 1000ml per day. Beer consists of a volume of 5% alcohol.

A further analysis shows a breakdown of those consuming more than 1000ml per day in table 5.25. It is a concern to note that there are respondents who consume up to six litres of beer per day. Respondents indicated that they drank in groups of 4 to 6 and consume cases of beer. Each case consists of twelve

750ml bottles of beer. Each respondent therefore has a number of these bottles per day, on average about 4 to 6 bottles.

Tables 5.26 and 5.27 show the wine and spirits consumption respectively. The volume of alcohol in wine varies between 11% and 13%, and that of spirits between 18 and 44% volume.

It was identified that fewer respondents drink wine and spirits because they find it too costly. Ten (6,5%) respondents, who indicated that they drank more than a 1000ml of wine per day, drink a very cheap wine. This is verified in a research project carried out by the researcher in a rural setting among farm labourers in Durbanville as described in paragraph 3.3. An individual consumed three bottles of wine from the time he stopped working at 18h00 until about 22h00 the evening.

The researcher found that females who drank socially normally had a liqueur that had an average of 16% to 18% volume of alcohol. It is alarming to note that 15 (9,7%) respondents consume spirits with a volume of 43% to 44% alcohol, and 1 (0,6%) consumes 1000ml per day. The following statistical results about the use of alcohol were obtained:

- The association between the residential area and the use of alcohol is not statistically significant (p=0315).
- The association between the socio-economic level and the use of alcohol is statistically significant, (p=0,001). Respondents from the lower-socio-economic (informal) level consume the most alcohol (55,6%).
- The association between gender and the use of alcohol is statistically significant, (p=0,001). Males consume more alcohol than females. (52,0%).
- The association between the marital status of respondents and use of alcohol is statistically significant, (p=0,047). Married respondents consumed the least alcohol (38%), the widow / widower consumes the most alcohol (60,8%) followed by the divorcee (58,3%) and then the single person (45,8%).
- Despite the large amount of alcohol that is consumed, the association between the amount of alcohol being consumed and the diastolic blood pressure of a respondent is not significant, as determined with the chi-square statistical test drinking beer (p=0,354); drinking wine (p=0,527) and drinking spirits (p=0,475).

- The association between the consumption of alcohol and the systolic blood pressure is not significant (p=0,299) as determined with the chi-square statistical test
- The consumption of alcohol (spirits) and the blood glucose levels of the respondents are also not significant (p=0,395).

Alcohol consumed in excess is destructive to the body. It especially affects the liver, pancreas, stomach, and brain (Brunner and Suddarith, 1996; Kozier *et al.*, 1995; 2000; Smeltzer and Bare 2000). High-risk behaviour of this nature influences the health status of an individual.

TABLE 5.24: IF QUESTION 20 IS APPLICABLE, WHAT TYPE OF ALCOHOL DO YOU CONSUME? BEER CONSUMPTION (N=155)

	N	%
Less than 500ml per day	29	18,7
Between 500ml and 1000ml	26	16,8
More than 1000ml daily	82	52,9
Nothing	18	11,6
TOTAL	**155**	**100,0**

TABLE 5.25: IF QUESTION 20 IS APPLICABLE, WHAT TYPE OF ALCOHOL DO YOU CONSUME? BEER CONSUMPTION MORE THAN 1000 ML PER DAY (N=82)

	N	%
750ml x 2 = 1500ml	33	40,2
750ml x 3 = 2250ml	15	18,2
750 ml x 4 = 3000ml	15	18,2
750ml x 5 = 3750ml	4	4,9
750 x 6 = 4500ml	11	13,4
750 x 8 = 6000ml	4	4,9
TOTAL	**82**	**100,0**

TABLE 5.26: IF QUESTION 20 IS APPLICABLE, WHAT TYPE OF ALCOHOL DO YOU CONSUME? WINE CONSUMPTION PER DAY (N=155)

	N	%
Less than 500ml	19	12,3
Between 500ml and 1000ml	16	10,3
More than 1000ml	10	6,5
Nothing	110	71,0
TOTAL	**155**	**100,0**

TABLE 5.27: IF QUESTION 20 IS APPLICABLE, WHAT TYPE OF ALCOHOL DO YOU CONSUME? SPIRITS CONSUMPTION PER DAY (N=155)

	N	%
Less than 500ml	18	11,6
Between 500ml	15	9,7
More than 1000ml	1	0,6
Nothing	121	78,1
TOTAL	**155**	**100.0**

Variable 27: If you answered "NO" to question 19, did you receive advice to stop taking alcohol?

To determine whether health education is being given to respondents who stop taking alcohol, the respondents were asked whether they had received advice to stop taking alcohol. Table 5.28 shows the number of people who had received advice but in table 5.29 it shows that predominantly self-education was applied.

TABLE 5.28: IF YOU ANSWERED "NO" TO QUESTION 19, DID YOU RECEIVE ADVICE TO STOP TAKING ALCOHOL? (N=73)

	N	%
Yes	72	98,6
No	1	1,4
TOTAL	**73**	**100,0**

Variables 28 29, 30, 31, 32: If "YES" to question 22, from whom did you receive advice?

In table 5.29 the data shows that the role played by health-workers and the church is minimal. It is interesting to note that 63 (87,5%) stopped on their own accord.

Table 5.29 show the church as the only one under "other" who gave the respondent advice.

TABLE 5.29: IF "YES" TO QUESTION 22, FROM WHOM DID YOU RECEIVE ADVICE? (N=72)

Self-Education	N	%
Yes	63	87,5
No	9	12,5
Nurse	**N**	**%**
Yes	1	1,4
No	71	98,6
Doctor	**N**	**%**
Yes	5	6,9
No	67	93,1
Friends or Colleagues	**N**	**%**
Yes	3	4,2
No	69	95,8
Other	**N**	**%**
Yes: Church Minister	6	8,3
No	66	91,7

Variables 33: Variable 20: Do you have a history of smoking

Table 5.30 shows the number of respondents who have a history of smoking, 226 (64,0%).

TABLE 5.30: DO YOU HAVE A HISTORY OF SMOKING? (N=353)

	N	%
Yes	226	64,0
No	127	36,0
TOTAL	**353**	**100,0**

Variable 34: If "YES" to question 24 do you still smoke?

In table 5.31 it is pleasing to note that of the number of respondents who have a history of smoking 226 (64,0%), 38 (16,8%) respondents stopped smoking, a positive direction towards good health.

TABLE 5.31: IF "YES" TO QUESTION 24, DO YOU STILL SMOKE? (N=226)

	N	%
Yes	188	83,2
No	38	16,8
TOTAL	**226**	**100,0**

Variable 35: If "YES" to question 25, how many cigarettes do you smoke?

Table 5.32 shows that the majority of respondents, 127 (67,6%) smoke less than 10 cigarettes per day while 17 (9,0%) smoke more than 20 cigarettes per day. Hirschowitz and de Castro (1998) support the findings of this study, who identified in an independent study, that the Coloured people smoke an average of nine (9) cigarettes per day.

According to the literature, smoking affects the body adversely. It may cause cancer of the larynx, bronchus, and lungs and furthermore it may aggravate cardiovascular diseases (Brunner and Suddarth, 1996; Uitenbroek *et al.,* 1996; Kozier *et al.,* 1995; Kozier *et al.,* 2000; Smeltzer and Bare, 2000). The study shows there is a relationship between the amount of cigarettes being smoked per day and income. The data shows that the majority of the respondents who earn R1500 per month and less, N=173, 70 (55,1%) smoke less than 10 cigarettes per day. However, it was identified that respondents who are on a higher socio-

economic level (higher educational levels and have a higher income per month) are less likely to smoke. 140 (53,7%) of the respondents with no post-schooling education, N=261, almost never avoid smoking, in comparison to those with a college diploma N=56, 14 (25,0%) almost never avoid smoking.

A gender association shows that of all the males N=142, 80 (56,3%) and of all the females N=211, 94 (44,6%) almost never avoid smoking respectively. The following statistical associations show that:

- The association between the residential area and respondents who have a history of smoking is statistically significant, (p=0,010) and those who currently smoke (p=0,029). The incidence of respondents who have a history of smoking in Bellville South is the highest (75,5%) followed by Elsiesriver (72,5%) and Kuilsriver (66,7%). The incidence of current smokers are highest in Kuilsriver (94,1%) followed by Elsiesriver (91,4%) and Kraaifontein (84,2%).
- The association between the socio-economic level and respondents who have a history of smoking is statistically significant, (p=0,001) and those who currently smoke (p=0,039). Respondents from the lower-socio-economic level (informal) have the highest incidence of smokers (83,5%). The least being among the upper-middle socio-economic level (43,9%).
- The association between gender and the incidence of respondents with a history of smoking is statistically significant, (p=0,001), more males have a history of smoking (75,1%) in comparison to females (55,9%).

TABLE 5.32: IF "YES" TO QUESTION 25, HOW MANY CIGARETTES DO YOU SMOKE (N=188)

	N	%
Less than 10 per day	127	67,6
10 to 20 per day	43	22,9
More than 20 per day	17	9,0
Other (Occasionally)	1	0,5
TOTAL	**188**	**100,0**

Variable 36: If you answered "NO" to question 25, when did you stop smoking?

Table 5.33 shows the times the respondents stopped smoking that varied from a month ago to more than two years ago. 17 (44,7%) stopped within the last two years while 21 (55,3%) stopped smoking more than two years ago. It would have been expected that an increasing number of respondents would have stopped smoking in the last two years. Health education with reference to the dangers of smoking has intensified, this is seen especially in advertisements and on cigarette packets; new laws being introduced restricting smoking in public areas and banning smoking in the work place (Government Gazette, December 1999.) The researcher found, however, that the stress levels of individuals have also increased and it was identified in the study that 12,9% of the respondents were smoking to decrease their stress levels, as described in paragraph 5.5.

TABLE 5.33: IF YOU ANSWERED "NO" TO QUESTION 25, WHEN DID YOU STOP SMOKING? (N=38)

	N	%
A month ago	3	7,9
About two to 6 months ago	4	10,5
Between 7 and 12 months ago	4	10,5
Between 1 and 2 years ago	6	15,8
More than 2 years ago	21	55,3
TOTAL	**38**	**100,0**

Variable 37: If "NO" to question 25 did you receive advice to stop smoking?

Table 5.34 shows that only 12 (31,6%) respondents indicated that they had received advice to stop smoking.

TABLE 5.34: IF "NO" TO QUESTION 25, DID YOU RECEIVE ADVICE TO STOP SMOKING (N=38)

	N	%
Yes	12	31,6
No	26	68,4
TOTAL	**38**	**100,0**

Variables 38, 39, 40, 41, and 42: If "yes" to question 28, from whom did you receive advice to stop smoking?

Table 5.35 shows an analysis of those who gave advice to respondents, N=12, among whom were doctors 5 (41,7%) and nurses 2 (16,7%). The church gave health education to 3 (25,0%) respondents (N=12).

TABLE 5.35: IF "YES" TO QUESTION 28, FROM WHOM DID YOU RECEIVE ADVICE TO STOP SMOKING (N=12)

Self-Education	**N**	**%**
Yes	6	50
No	6	50
Nurse	**N**	**%**
Yes	2	16,7
No	10	83,3
Doctor	**N**	**%**
Yes	5	41,7
No	7	58,3
Friends or Colleagues	**N**	**%**
Yes	1	8,3
No	11	91,7
Other	**N**	**%**
Yes: Church (3) Wife (1)	4	33,3
No	8	66,7

In comparison with alcohol, fewer respondents received advice to stop smoking, a wider variety of persons were also involved in giving advice to respondents to

stop smoking. Despite the fact that cigarettes are equally destructive to the patient, society accepts smoking more readily than when someone abuses alcohol. The individual is not alienated or ostracized for smoking excessively as opposed to alcohol abuse. Individuals therefore stop drinking alcohol more readily and on their own accord than they would stop smoking.

Variable 43: Do you have a history of taking drugs?

Table 5.36 shows that 121 (34,3%) respondents were using drugs, which included legal and illegal drugs. In a further analysis, the types of drugs are shown.

TABLE 5.36: DO YOU HAVE A HISTORY OF TAKING DRUGS? (N=353)

	N	%
Yes	121	34,3
No	232	65,7
TOTAL	**353**	**100,0**

Variable 44: If "YES" to question 30, do you still take drugs?

Table 5.37 shows that 11 (9,0%) of the respondents are no longer using illegal drugs. The majority, 59 (53,6%) of the respondents use chronic medication, this excludes respondents using anti-inflammatory medication, which is used when required.

TABLE 5.37: IF "YES" TO QUESTION 30, DO YOU STILL TAKE DRUGS? (N=121)

	N	%
Yes	110	91,0
No	11	9,0
TOTAL	**121**	**100,0**

Variables 45, 46, 47, 48, and 49: If "YES" to question 31, what type of drugs do you use?

Tables 5.38 and table 5.39 show an analysis of the types of drugs commonly used. The largest number of respondents 35 (31,8%) are using pain tablets. These respondents indicated that pain tablets are being used for any type of pain including headaches. The most common of these is paracetamol. Respondents 13 (11,8%) using anti-inflammatory drugs use them predominantly for arthritis. 7 (4,9%) of the male population use anti-inflammatory drugs compared to females, 6 (2,8%). Only male respondents use illegal drugs namely; marijuana, 14 (9,9%) and mandrax 8 (5,6%). A further analysis shows that there is no difference in the socio-economic level of the users of marijuana and mandrax. The majority were from the low socio-economic level except for 1 (7,1%) respondent from the upper-middle economic level who uses marijuana. Illegal drugs are expensive, during an interview the researcher was informed by the respondents concerned that they pay up to R50 for a "quality" marijuana smoke. It is a concern to note that the majority of the users of these drugs are of a low socio-economic level and can least afford the drugs.

The majority of illegal drug users are between the ages 21-30, 5 (62,5%) of mandrax users N=8, and marijuana (71,4%) users N=14.

Respondents indicated that the drugs are used to obtain a feeling of euphoria, to forget their problems and to ease their stress levels.

The incidence of the number of respondents who have a history of using illegal drugs is still too high 33 (9,3%) of the sample N=353 and those who continue to use illegal drugs, 22 (6,2%) of the sample N=353. The abuse of drugs has long-term adverse effects on the body, especially affecting the central nervous system (Brunner and Suddarth, 1996; Uitenbroek *et al.*, 1996; Kozier *et al.*, 1995; Kozier *et al.*, 2000; Smeltzer and Bare, 2000).

Table 5.38. shows an analysis of a variety of drugs used for chronic diseases. Among the most common are drugs for conditions such as hypertension, asthma, epilepsy, sinusitis, and diabetes mellitus as described in paragraph 5, section H. Aggravating high-risk behavioural factors that contribute to an increase in blood pressure are:

- 57 (32,8%) of all smokers who are unable to avoid smoking have a high

diastolic blood pressure

- 52 (29,9%) of all smokers who are unable to avoid smoking have a high systolic pressure
- 37 (36,3%) of all alcohol users who are unable to avoid consuming alcohol have an increase systole
- 39 (38,2%) of all alcohol consumers who are unable to avoid consuming alcohol have a high diastole.

TABLE 5.38: IF "YES" TO QUESTION 31, WHAT TYPE OF DRUGS DO YOU USE? (N=110)

Pain tablets	**N**	**%**
Yes	35	31,8
No	75	68,2
Anti-inflammatory Drugs	**N**	**%**
Yes	13	11,8
No	97	88,2
Marijuana (dagga)	**N**	**%**
Yes	14	12,7
No	96	87,3
Mandrax	**N**	**%**
Yes	8	7,3
No	102	92,7
Other	**N**	**%**
Yes	59	53,6
No	51	46,4

The association between the age of the respondents and the systolic blood pressure is statistically significant (p=0,001) also the diastolic pressure (p=0,001).

The systolic pressures of the various age groups are as follows:

- 21-30 years: normal systolic blood pressure (39,4%) those with an increase in systolic (19,1%)
- 31-40 years: normal systolic blood pressure (54,2%) those with an increase in systolic pressure (21,4%)
- 41-50 years: normal systolic blood pressure (21,2%) those with an

increase in systolic pressure (49,5%)

The diastolic blood pressures of the various age groups are as follows: .

- 21-30 years: normal diastolic blood pressure (39,4%) those with an increase in diastolic (20,4%)
- 31-40 years: normal diastolic blood pressure (54,2%) those with an increase in diastolic pressure (12,5%)
- 41-50 years: normal diastolic blood pressure (21,2%) those with an increase in diastolic pressure (44,3%)

The risk for the development of a cardiovascular disease increases with the consumption of alcohol and cigarette smoking (Smeltzer and Bare, 2000).

TABLE 5.39: IF "YES" TO QUESTION 31, WHAT TYPE OF DRUGS DO YOU USE: OTHER (N=59)

	N	%
Central Nervous System	7	11,9
Cardiovascular System	21	35,6
Endocrine system	14	23,7
Anticoagulants	1	1,7
Respiratory	14	23,7
Immuno-suppressants	2	3,4
TOTAL	**59**	**100,0**

Variable 50: How many of these drugs as indicated above do you use?

Table 5.40 shows the number of prescribed drugs taken per day. 87 (79,1%) take between two and four drugs per day, while 16 (14,5%) use more than four drugs per day. Antihypertensive drugs were of the more common chronic drugs, no specific drug dominated among the respondents. The data obtained about the medications respondents are using makes the nurse aware of the health education required to ensure compliance. The researcher interviewed three (3) respondents who were no longer taking their antihypertensive drugs, as they felt much better. In the research project as described in paragraph 3.2 it was identified that many respondents discontinued their medication when they felt

better. It is therefore imperative that there is a constant awareness about patient education with reference to the use of medications in order to avoid problems such as cerebral haemorrhages, which may be a financial burden for the state.

TABLE 5.40: HOW MANY OF THESE DRUGS AS INDICATED ABOVE DO YOU USE? (N=110)

	N	%
Between 2 and 4 per day	87	79,1
More than 4 per day	16	14,5
Other: ½ tablet per day (6) 10 drops per day (1)	7	6,4
TOTAL	**110**	**100,0**

Variable 51: If "YES" to question 32, when do you take these drugs?

Table 5.41 shows the times when most drugs are taken. Prescribed medications are taken daily, 60 (54,5%) while the illegal drugs, mandrax and marijuana are taken over weekends and occasionally. The data alerts the nurse, related health professionals, traffic officials, and police when to expect the high incidences of substance abuse, which can result in negligent behaviour, so that pro-active planning can be, introduced. The use of illegal drugs may lead to negligent driving, increase in motor vehicle accidents, conflict, sexual and physical assault, ultimately an increase in trauma cases in a hospital.

TABLE 5.41: IF "YES" TO QUESTION 32, WHEN DO YOU TAKE THESE DRUGS? (N=110)

	N	%
Daily	60	54,5
Weekends	26	23,6
Other:Occasionally (13); Nocte (7); Alternate days (3); Weekly (1)	24	21,8
TOTAL	**110**	**100,0**

Variable 52: If you answered "NO" to question 31, when did you stop taking drugs?

Table 5.42 shows an analysis of when respondents stopped taking drugs. In the interviews conducted, the researcher identified that all these respondents used illegal drugs.

TABLE 5.42: IF YOU ANSWERED "NO" TO QUESTION 31, WHEN DID YOU STOP TAKING DRUGS (N=11)

	N	%
A month ago	0	0,0
About two to six months ago	2	18,2
Between 7 and 12 months ago	1	9,1
Between 1 and 2 years ago	1	9,1
More than 2 years ago	7	63,6
TOTAL	**11**	**100,0**

Variable 53: If you answered "No" to question 31 did you receive advice to stop taking drugs.

Table 5.43 shows that 11 (100,0%) respondents received advice to stop taking illegal drugs. This is a positive contribution to the health status of the respondent and the community at large. The use of illegal drugs has adverse effects on the person that could have been avoided if:

- Appropriate support systems were in place in the community
- Health education was seen as a priority.

TABLE 5.43: IF YOU ANSWERED "NO" TO QUESTION 31, DID YOU RECEIVE ADVICE TO STOP TAKING DRUGS (N=11)

	N	%
Yes	11	100
No	0	0
TOTAL	**11**	**100,0**

Variable 54: If "Yes" to question 36, from whom did you receive advice?

Table 5.44 shows an analysis of the various role players who gave the respondents advice to stop taking drugs. Respondents were given the option of indicating more than one person who was involved in giving them advice to stop taking illegal drugs. Eight (72,7%) of those respondents who discontinued the use of illegal drugs of their own accord certainly provide a positive sign for the health status of the community. If this trend continues it can only be a positive step in the right direction.

TABLE 5.44: IF YOU ANSWERED "YES" TO QUESTION 36, FROM WHOM DID YOU RECEIVE ADVICE (N=11)

Self-Education	**N**	**%**
Yes	8	72,7
No	3	27,3
Nurse	**N**	**%**
Yes	2	18,2
No	9	81,8
Doctor	**N**	**%**
Yes	1	9,1
No	10	90,9
Friends or Colleagues	**N**	**%**
Yes	2	18,2
No	9	81,8
Other	**N**	**%**
Yes: Spouse (1)	1	9,1
No	10	90,9

In conclusion, there is an association between the health status and the social habits of the respondents (smoking, alcohol and drug use). As described in paragraph 5.13, section K, 174 (49,3%), N=353 never avoid smoking, while 102 (28,9%) never avoid consuming alcohol, N=353.

5.4 SECTION C: DIET

This section (questions 38 to 52), refers to dietary habits. It consists of 9 close-ended questions, 5 open-ended questions, and 10 variables.

Variable 59: How many meals do you have per day?

Table 5.45 shows that 43,3% of the respondents have one meal per day. This "meal" included vegetables and meat or equivalent. These respondents indicated that they only eat bread at other meal times. A number of respondents 68 (19,3%) indicated that they have three meals per day.

It was further identified that 53 (26,4%) who are unemployed, N=201, almost never eat a variety of foods per day such as fruit and vegetables, whole grain breads and cereals, lean meat or dairy products; of those who have no income, N=52, 23 (44,2%) respondents do not eat a variety of foods per day (see paragraph 5.13).

However, the association between the number of meals a respondent has and the diastolic blood pressure, (p=0,159) or systolic blood pressure, (p=0,722) is not statistically significant as determined with the chi-square statistical test.

TABLE 5.45: NUMBER OF MEALS PER DAY (N=353)

	N	%
1 meal	153	43,3
2 meals	124	35,1
3 meals	68	19,3
More than 3 meals	8	2,3
TOTAL	**353**	**100,0**

Variable 60: How do you rate your availability of money for meals (a meal includes vegetables and meat or equivalent not only a sandwich)?

According to Kozier *et al.,* (2000) it is essential to have an adequate food intake

that consists of a balance of essential nutrients, water, carbohydrates, proteins, fats, vitamins, and minerals. Nutrients have three major functions: it provides energy for body processes and movement, providing structural material for body tissues and regulating body processes. Food is a basic physiological need and may directly affect the body. Therefore, it is essential to have money to buy food.

In table 5.46, 127 (36,0%) indicated that they always have money for meals. However, it is a concern to note that 79 (22,4%) have money most times, 119 (33,7%) have money sometimes, while a number of respondents, 28 (7,9%) never have money. Respondents who indicated that they sometimes or never have money for food, were asked how they are able to survive. These respondents indicated that they are dependent on families, some begged, or simply just went without food if they did not have food on a particular day.

A selection criterion for the study was that it included participants who are economically active, including workers (employers and employees) in both the formal and informal sectors, and persons who are unemployed. These respondents therefore form part of the economically active population that is expected to be energetic and healthy to help build the economy of the country. It is therefore a concern that there are respondents who indicated that they sometimes (33,7%) or never have money (7,6%) to buy food.

It is disturbing to note that 35 (31%) of the respondents with an increased diastole have indicated that they sometimes have money to buy food, and 12 (10,6%) of the respondents with an increased diastole have indicated that they never have money to buy food.

The following statistical associations show that:

- The association between the residential area and whether respondents have money to buy food is statistically significant (p=0,008). The highest incidence of those who do not have money to buy food is from Elsiesriver (51,3%) followed by Kraaifontein (49,2%) and Kuilsriver (46,0%).
- The association between the socio-economic level and whether respondents have money to buy food is statistically significant (p=0,001). The highest incidence of those who do not have money to buy food is from the lower socio-economic informal level (69,1%) followed by the lower socio-economic formal level (49,6%).
- The association between the marital status and whether respondents have

money to buy food is statistically significant (p=0,001). The highest incidence of those who do not have money to buy food are living together (70,8%) followed by the widows/widowers (70,0%) and the divorcees (53,6%).

- The association between the literate and the whether respondents have money to buy food is statistically significant (p=0,001). The highest incidence of those who do not have money to buy food are illiterate (80,0%) while those who are literate (39,6%).

However, association between whether a respondent had money to buy food or not, and the diastolic blood pressure of a respondent is not significant (p=0,456) or the systolic blood pressure (p=0,6) is not significant as determined with the chi-square statistical.

A balanced meal is essential as this is a basic need of the body. The respondents are in their productive years and have to contribute meaningfully to the country's economy. How is this possible if they lack the energy and will to do so? A trend in this direction may influence the country negatively.

TABLE 5.46: HOW DO YOU RATE YOUR AVAILABILITY OF MONEY FOR MEALS (N=353)

	N	%
Always have money	127	36,0
Most times have money	79	22,4
Sometimes have money	119	33,7
Never have money	28	7,9
TOTAL	**353**	**100,0**

Variable 61: How often do you have fresh vegetables?

Table 5.47 shows that the respondents' consumption of fresh vegetables varied, 112 (31,7%) consume vegetables daily; whilst 81 (22,9%) have vegetables at least three times per week; and 71 (20,1%) at least twice per week. Respondents indicated that vegetables were too expensive to have daily.

It is however, disheartening to note that a significant number of respondents, 41 (11,6%) consume fresh vegetables at least once a week; 22 (6,2%) seldom consume fresh vegetables and 7 (2,0%) never consume fresh vegetables.

Major nutrients such as carbohydrates, vitamins, proteins, and mineral salts are found in vegetables. It is essential to have a daily balanced diet containing all major nutrients. An inadequate intake of fresh vegetables affects the body adversely (Kozier *et al.,* 2000). Examples to illustrate the role of fresh vegetables are seen in normal cellular function and formation of red blood cells (Kozier *et al.;* Marieb, 1998; Smeltzer and Bare, 2000). It is a concern that 241 (68,3%) do not have fresh vegetables daily. The body has specific daily requirements for all nutrients as described in the conclusion of this section, if these are not met, deficiency diseases may set in.

TABLE 5.47: HOW OFTEN DO YOU HAVE FRESH VEGETABLES? (N=353)

	N	%
Daily	112	31,7
At least three times a week	81	22,9
At least twice a week	71	20,1
At least once a week	41	11,6
Seldom	22	6,2
Never	7	2,0
Other: Four times per week (4), four times per week (13); Twice per month (2)	19	5,4
TOTAL	**353**	**100,0**

Open Question: If "*seldom*" or "*never*" to question 40, please specify why?

Table 5.48 shows the reasons why respondents answered "*seldom*" or "*never*"; economic reasons 15 (51,7%) and attitude 14 (48,3%). Attitudinal reasons given included "*My husband don't like vegetables, so I don't make it*"; "*I don't like vegetables*"; "*It takes to long to cook*". Economic reason given was that "*There is no money*".

TABLE 5.48: If "*SELDOM*" OR "*NEVER*" TO QUESTION 40, PLEASE SPECIFY WHY (N=29) (VEGETABLES)

	N	%
Attitude	14	48,3
Economic (No money)	15	51,7
TOTAL	**29**	**100,0**

Variable 61: How often do you have fresh fruit?

Table 5.49 shows that the consumption of fresh fruit varied; 153 (43,3%) respondents consume fruit daily; whilst 55 (15,6%) three times per week; and 50 (14,2%) twice per week. It is noteworthy that 153 (43,3%) of the respondents consume fruit daily, this is positive behaviour favouring a healthy lifestyle. However, respondents who never 13 (3,7%) or seldom, 49 (13,9%) eat fruit explained that fruit was a "luxury" and not an essential commodity to have daily. Secondly, money was not always available for fruit.

As in vegetables major nutrients are found in fruit such as carbohydrates, vitamins, proteins, and mineral salts. An inadequate intake of fresh fruit affects the body adversely (Kozier *et al.*, 2000). Examples to illustrate the role of fresh fruit are seen in normal cellular function and the body's immunity system (Kozier *et al.*, 2000; Marieb, 1998; Smeltzer and Bare, 2000).

TABLE 5.49: HOW OFTEN DO YOU HAVE FRESH FRUIT? (N=353)

	N	%
Daily	153	43,3
At least three times a week	55	15,6
At least twice a week	50	14,2
At least once a week	29	8,2
Seldom	49	13,9
Never	13	3,7
Other: Four-five times	3	0,8
No response	1	0,3
TOTAL	**353**	**100,0**

Open Question: If "seldom" or "never" to question 42 please specify why

Table 5.50 shows the reasons why respondents indicated "*seldom*" or "*never*", economic 25 (7,1%) and attitude 37 (10,5%). Attitudinal reasons include statements such as "*I forget to eat fruit*"; "*After eating my food, I am too full to still eat fruit*", " *I don't like fruit*".

TABLE 5.50: If "*SELDOM*" OR "*NEVER*" TO QUESTION 42 PLEASE SPECIFY WHY (FRUIT) (N=62)

	N	%
Attitude	25	40,3
Economic (No money)	37	59,7
TOTAL	**62**	**100,0**

Variable 63: How often do you have red meat?

Table 5.51 shows that 54 (15,3%) have red meat daily; 100 (28,3%) three times per week; 78 (22,1%) at least twice a week. A number of respondents have red meat once week 56 (15,9%); 26 (7,4%) seldom and 10 (2,8%) never. There is no association between employment and unemployment and the number of times respondents eat meat. Statistically, respondents who indicated they eat red meat daily N=54, 22 (40,7%) are employed and 32 (59,3%) are unemployed. Another statistical illustration shows that the respondents who have red meat three times per week N=100, 29 (37,2%) are employed and 49 (62,8%) are unemployed.

Essential amino acids cannot be manufactured in the body, and must be supplied as part of the protein ingested in the diet. Nine of the essential amino acids are necessary for tissue growth and maintenance. Most animal proteins including meats, poultry and fish consist of complete proteins that consist of essential amino acids and some non-essential ones. It is therefore essential that animal proteins are consumed and form part of a daily balanced diet (Kozier *et al.* 2000). Animal proteins are expensive and substitutes such as soya, dried beans and peas may also supplement the diet.

Despite the normal requirements of essential amino acids, red meat has a high

content of cholesterol that contributes to atherosclerosis. The American Heart Association recommends a diet containing less than 30% fat (with less than 10% from saturated fat) and less than 300mg cholesterol per day (Smeltzer and Bare, 2000).

However, it was identified in the interviews that the majority of the respondents indicated that they did not eat the ideal amount of meat, but mostly bones with a bit of meat on them.

TABLE 5.51: HOW OFTEN DO YOU HAVE RED MEAT? (N=353)

	N	%
Daily	54	15,3
At least three times a week	100	28,3
At least twice a week	78	22,1
At least once a week	56	15,9
Seldom	26	7,4
Never	10	2,8
Other: Four times per week (16); Five times per week (9), Four to five times per week (1); Every second week (1), Once per month (1)	29	8,2
TOTAL	**353**	**100,0**

OPEN QUESTION Reasons why respondents answered "*seldom*" or "*never*" (Red Meat)

Table 5.52 shows the reasons why respondents answered "*seldom*" or "*never*". Reasons varied between economic 17 (47,2%), attitude 14 (38,9%) and health reasons 5 (13,9%). Attitudinal reasons included statements such as "*I don't like meat*"; "*I'm a vegetarian*"; *"I don't eat meat because there are bones in it*"; "*Chicken is cheaper*" Health reasons included statements such as *"...doctor advised that we must cut down on meat"; "My father has heart disease so we eat more chicken*".

TABLE 5.52: IF "*SELDOM*" OR "NEVER" TO QUESTION 44, PLEASE SPECIFY (RED MEAT) (N=36)

	N	%
Attitude	14	38,9
Economic (no money)	17	47,2
Health reasons	5	13,9
TOTAL	**36**	**100, 0**

Variable 64: How often do you have fish?

Table 5.53 shows that 7 (2%) have fish daily; 24 (6,8%) three times per week; 46 (13.0%) at least twice a week. A significant number of respondents have fish once a week 165 (46,7%); 74 (21,0%) seldom and 27 (7,6%) never. As discussed above (see paragraph 5.5, section C) essential amino acids cannot be manufactured in the body, and must be supplied as part of the protein ingested in the diet. Nine of the essential amino acids are necessary for tissue growth and maintenance. Most animal proteins including meats, poultry and fish consist of complete proteins that consist of essential amino acids and some non-essential ones. Fish is also a major source of minerals such as iron, calcium, and iodine (Kozier *et al.*; 1995; 2000.) It is therefore essential that fish also be consumed as part of a balanced meal. Fresh fish is expensive; respondents indicated that they supplement the fresh fish with tinned fish, which also provides the required nutrients.

TABLE 5.53: HOW OFTEN DO YOU HAVE FRESH FISH (N=353)

	N	%
Daily	7	2,0
At least three times a week	24	6,8
At least twice a week	46	13,0
At least once a week	165	46,7
Seldom	74	21,0
Never	27	7,6
Other: Four to five times per week (3); twice per week (5)Once per month (2)	10	2,8
TOTAL	**353**	**100,0**

OPEN QUESTION: If "*seldom*" or "*never*" to question 46, please specify

Table 5.54 shows the reasons why respondents answered "*seldom*" or "*never*"; economic 41 (40,6%), attitude 40 (39,6%) and health reasons 1 (1,0%). Attitudinal reasons include statements such as *"I don't like fish products"; "I'm tired of fish"; "Due to the smell"; "Fish bones work on me"*. Only one health reason was given namely, "*I'm allergic to fish*".

Availability of fish 19 (18,8%) depends on the "*fish lorries that sold fish*". If these "*lorries*" do not come into the neighbourhood to sell fresh fish, respondents will not have fresh fish. Respondents indicated that fresh fish is too expensive in the supermarkets and that they cannot afford it. Economic reasons given include "Fis*h is too expensive"; "I have no money for fish*".

TABLE 5.54: IF "*SELDOM*" OR "*NEVER*" TO QUESTION 46, PLEASE SPECIFY (N=101)

	N	%
Attitude	40	39,6
Availability	19	18,8
Economic	41	40,6
Health reasons: Allergic to fish	1	1,0
TOTAL	**101**	**100,0**

Variable 65: How often do you have white meat?

Table 5.55 shows that 21 (5,9%) have white meat daily; 89 (25,2%) three times per week; 88 (24,9%) at least twice a week. A significant number of respondents have white meat once a week 105 (29,7%); 13 (3,7%) seldom and 4 (1,1%) never. White meat also contains the essential amino acids required by the body. Despite the large amount of cholesterol found in the skin of chicken, it is a healthier type of meat than red meat when eaten without its skin. Individuals who are at high risk to develop cardiovascular diseases, are advised to eat more chicken than red meat (Kozier *et al.*, 2000; Smeltzer and Bare 2000).

TABLE 5.55: HOW OFTEN DO YOU HAVE WHITE MEAT? (N=353)

	N	%
Daily	21	5,9
At least three times a week	89	25,2
At least twice a week	88	24,9
At least once a week	105	29,7
Seldom	13	3,7
Never	4	1,1
Other: Four times per week (23); Five times per week (9), Once per month (1)	33	9,3
TOTAL	**353**	**100,0**

OPEN QUESTION: If "*seldom*" or "*never*" to question 48, please specify (white meat)

Table 5.56 shows the reasons why respondents answered "*seldom*" or "*never*"; economic reasons 12 (70,6%), attitude 4 (23,5%) and health reasons 1 (5,9%). Attitudinal reasons include statements such as *"I don't like chicken"; "I'm a vegetarian"; "I had too much chicken before, I'm tired of it".*

TABLE 5.56: IF "*SELDOM*" OR "*NEVER*" TO QUESTION 48, PLEASE SPECIFY (N=17) (WHITE MEAT)

	N=17	%
Attitude	4	23,5
Economic "no money"	12	70,6
Health reasons	1	5,9
TOTAL	**17**	**100,0**

Variable 66: What type of meat do you consume?

Table 5.57 shows an analysis of the respondents' meat preference. It is interesting to note that 147 (41,6%) of the respondents consume red and white meat equally. However, table 5.59 shows that a number of respondents eat more white meat 115 (32,6%) than red meat, a positive aspect that promotes good

health. It is also a concern to note that there is a large percentage of respondents, 73 (20,7%) who are eating more red than white meat. Red meat contains saturated fats, a major contributor to cardiovascular disease (Smeltzer and Bare, 2000).

It was identified that 94 (26,6%) never avoid limiting the amount of fat, cholesterol, and saturated fat and of these respondents, 56 (59,6%) are unemployed.

A comparison between males and females shows that 16,9% of the males and 17,6% females eat red meat only. 9,9% males and 4,7% female respondents ate both red and white meat equally. It is interesting to note that fewer males than females eat red meat and more white meat.

TABLE 5.57: WHAT TYPE OF MEAT DO YOU CONSUME? (N=353)

	N	%
Red meat only (for example beef)	6	1,7
White meat only (for example chicken, fish)	11	3,1
Red and white meat equally	147	41,6
Other: More red 73(20,7%), more white 115(32,6%), more fish 1(0,2%)	189	53,5
TOTAL	**353**	**100,0**

Variable 67: Do you like salt?

Table 5.58 shows that 211 (59,8%) of the respondents like salt in comparison to 142 (40,2%). There is no significant difference in the affinity to salt between males and females. However, there is a significant decrease in affinity to salt between the ages 41-50 years, 51 (52,6%) in comparison to other age groups, namely between ages 21-30: 76 (62,3%) and 31-40: 84 (62,7%). Respondents of the age group 40-50 years show the highest hypertension rate, these respondents are possibly aware that too much salt retains water and subsequently increases the blood pressure.

- 30 (22,4%) of respondents of the age group 31-40 years have a high systolic pressure (N=134)

- 47 (48,5%) of respondents of the age group 41-50 years have a high systolic pressure (N=97)

TABLE 5:58: DO YOU LIKE SALT (N=353)

	N	%
Yes	211	59,8
No	142	40,2
TOTAL	**353**	**100,0**

Variable 68: How will you rate your salt intake after cooking?

Table 5.59 shows that a significant number of respondents 212 (60,1%) never add extra salt to their food after cooking. However, it is a concern that 60 (17%) always add extra salt to their food after cooking. This becomes a hindrance as sodium promotes renal re-absorption of water and the release of potassium, consequently normal blood pressure is increased. This is especially aggravating in patients with hypertension (Marieb, 1998; Smeltzer and Bare, 2000). A further discussion on the use of salt follows in paragraph 5.13, in which comparisons and effecs of blood pressure are discussed.

TABLE 5.59: HOW WILL YOU RATE YOUR SALT INTAKE AFTER COOKING? (N=353)

	N	%
Always add extra salt to food	60	17,0
Occasionally add extra salt to food	38	10,8
Seldom add extra salt to food	43	12,2
Never add extra salt to food	212	60,1
TOTAL	**353**	**100,0**

In conclusion the United States Department of Agriculture (USDA) and the Department of Health and Human Services as discussed in Kozier *et al.*, (1995, 2000) introduced a revised copy of recommendations for food choices to help promote health and to prevent certain diseases in 1990. The following key points

were introduced:

- Eat a variety of foods
- Maintain a healthy mass
- Eat a diet low in fat, saturated fat and cholesterol
- Eat plenty of vegetables, fruits and grain products
- Use sugars in moderation
- Use salt and sodium in moderation

The food guide pyramid, a graphic presentation was introduced. The following is recommended as a balanced daily diet and selections can be made:

- Breads, cereals, rice, and pasta group: 6-11 servings
- Fruit group 2-4 servings
- Vegetable group 3-5 servings
- Milk, yoghurt and cheese group 2-3 servings
- Meat, poultry, fish, dry beans, eggs and nuts: 2-3 servings
- Fats, oils and sweets sparingly

The sizes of servings differ for each item, a few examples are listed:

- Bread, pasta cereal, rice: 1 serving = 1 slice of bread; ½ cup of cooked pasta; ½ cup 30ml ready-to-eat cereal
- Vegetable group: 1 serving = 1 cup raw leafy vegetables; ¼ cup of dried vegetables
- Fruit group: 1 serving = 1 medium apple, banana or orange; ¾ cup of fruit juice
- Meat, poultry, fish: 1 serving = 1 egg; ½ cup of legumes; 30-60gm of lean beef, pork or mutton; ¼ cup of nuts.
- Milk, yoghurt and cheese group: 1 serving=1 cup (250ml) milk or yoghurt; 45gm natural cheese
- Fats, oils and sweets: use sparingly (Kozier *et al.,* 1995; 2000).

A balanced meal consists of the required nutrients that are required. If the required nutrients are not consumed per day, deficiency diseases can occur. The following are a few deficiency diseases that may result due to a lack of one or more nutrients in the diet:

- A normal calcium requirement per day is 800-1200mg, deficiency in calcium may cause stunted growth; bone loss
- Iron intake varies for females and males; females require 10-15mg per day and males 10-12mg. per day. A deficiency causes iron-deficiency

anaemia, weakness, impaired immune function

- Vitamin A requirement per day, females 4000iu and males 5000iu. A deficiency results in keratinisation of epithelial tissues, opacity of the cornea, night blindness, dry and scaling skin.
- Vitamin B1 requirement per day females: 1,2 –1,3mg and males 1,2 to 1,5mg. A severe prolonged deficiency causes beriberi (nerve changes; sometimes oedema, heart failure, muscle weakness) (Kozier *et al.,* 1991)

It is a concern to note that 33,7% and 7,6% of the respondents respectively indicated that they sometimes or never have money for food. Furthermore, the majority of the respondents do not have a balanced diet every day. The value of a normal balanced diet as described above, is imperative for a healthy lifestyle, a productive and meaningful life. A healthy nation is an asset to the well-being of a country. The data analysis therefore appears to show that the diet of respondents could contribute to poor health.

5.5 SECTION D: EXERCISE, STRESS, MANAGEMENT AND LEISURE TIME

Variable 69: Do you associate good health with exercise?

It is interesting to note that 340 (96,3%) of the respondents associate exercise with good health as shown in Table 5.60. It is a positive aspect that the respondents associate good health with exercise.

TABLE 5.60: DO YOU ASSOCIATE GOOD HEALTH WITH EXERCISE? (N=353)

	N	%
Yes	340	96,3
No	13	3,7
TOTAL	**353**	**100,0**

Variable 70: Do you exercise?

As seen in table 5.61 a large percentage of respondents 340 (96,3%) associate

exercise with good health. However, table 5.62 shows that a number of respondents 165 (46,7%) have indicated that they do exercise. However, 165 (48,5%) of the 340 respondents who indicated they associated good health with exercise, do actually exercise. A gender comparison shows that 82 (49,4%) are males, and 84 (50,6%) of those who exercise N=165 (48,5%) are females.

Among the employed 74 (44,8%) exercise, while 92 (55,8%) who are unemployed, exercise. It is interesting to note that 24 (46,2%) of those without an income also exercise (N=52). Lynch *et al.* (1997) also validates that lower socio-economic status is associated with lower levels of physical exercise and higher prevalence of psychosocial orientations that are related to poor health outcomes. In this study the following statistical associations show that:

- The association between gender and exercise is statistically significant (p=0,005), 57,8% of males exercise and 39,8% females.
- The association between literacy and exercise is statistically significant (p=0,032). Of all the respondents who do exercise (98,2%) are literate and 1,8% are not literate

Clark *et al.* (1995) shows that there is an association between socio-economic status and exercise self-efficacy. People of a low socio-economic level are more reluctant to do exercise than those on a higher socio-economic level.

The association between exercise and the diastolic blood pressure is significant (p=0.02) as determined with the chi-square statistical test. Respondents who exercise have a higher incidence of normal blood pressure and a lower incidence of high blood pressure than those who do not exercise.

TABLE 5.61: DO YOU EXERCISE? (N=353)

	N	%
Yes	165	46,7
No	188	53,3
TOTAL	**353**	**100,0**

Variable 71: If "yes" to question 54, how often do you exercise?

According to table 5.62 the analysis shows that 72 (43,6%) of the respondents

exercise daily and 52 (31,5%) at least three times per week, Studies have shown that a regular exercise programme promotes good health by improving the function of the cardiovascular and the respiratory systems. It decreases cholesterol and low-density lipoproteins, lowers body mass by increasing kilojoules expenditure, delaying degenerative changes such as osteoporosis and improving muscle strength and overall endurance. Regular exercise with a duration of 30 minutes at a time, at least three times per week is recommended (Marieb, 1998; Kozier *et al.,* 2000; Smeltzer and Bare, 2000). Described in paragraph 5.13, 247(70,0%) of the respondents do not do vigorous exercise such as brisk walking, swimming, and running for 15-30 minutes at least three times per week.

The association between the number of times the respondents exercised and the diastolic pressure (p=0.1) is not significant. The association between whether the respondent did vigorous exercise or not, (p=0,4) is not significant as determined with the chi-square statistical test.

TABLE 5.62: IF "YES" TO QUESTION 54, HOW OFTEN DO YOU EXERCISE? (N=165)

	N	%
Daily	72	43,6
At least three times per week	52	31,5
At least once a week	25	15,2
Occasionally	16	9,7
TOTAL	**165**	**100,0**

Variables 72,73, 74, 75, 76: If "YES" to question 54, what type of exercise do you do?

An analysis of the types of exercise is shown in tables 5.63 and 5.64. Most respondents, 143 (87,0%) walked as their form of exercise. However, these respondents were forced to walk to their place of employment, to the railway station, or for a taxi or bus. Exercises are not intentional, as was clarified with the researcher. According to the respondents there is no time to follow an exercise programme, walking was their only means of getting somewhere and that they

considered that as their daily exercise. However, this is meaningful for respondents of a lower socio-economic level as they do not have the infrastructure and financial means to follow a structured exercise programme.

Walking is the least expensive mode of exercise. A socio-economic analysis shows that respondents who walk as a form of exercise, among the employed N=152, 64 (42%) walk, among the unemployed N=201, 79 (39,3%) walk and among those respondents with no income N=52, 20 (38,5%) walk.

TABLE 5.63: IF "YES" TO QUESTION 54, WHAT TYPE OF EXERCISE DO YOU DO? (N=165)

Walking	**N**	**%**
Yes	143	87,0
No	22	13,3
Swimming	**N**	**%**
Yes	33	20,0
No	132	80,0
Running	**N**	**%**
Yes	62	38,0
No	103	62,4
Aerobics	**N**	**%**
Yes	38	23,0
No	127	70
Other	**N**	**%**
Yes	55	33,3
No	110	66,6

A further analysis shows that 56 (45,5%) were from the upper-middle socio-economic level N=123, 49 (36,8%) from the lower socio-economic level living in formal housing N=133, and 38 (39,2%) from lower socio-economic level living in informal housing N=97. The analysis therefore shows that even the least expensive mode of exercise is associated with the higher socio-economic level. One would expect that respondents of the lower socio-economic level would choose walking as a form of exercise, but this has been found not to be so. In interviews with respondents, the researcher has identified that the value the

respondents attach to exercising is minimal because there is a lack of health education. The respondents are not able to understand and conceptualise the benefits of exercising and how this makes a positive contribution to a healthy lifestyle.

This study supports Lynch *et al.* (1997) who identified that those of a lower socio-economic status are associated with lower levels of physical exercise and higher prevalence of psychosocial orientations that are related to poor health outcomes. The study also supports Clark *et al.* (1995) who identified that there is an association between socio-economic status and exercise self-efficacy. People of a low socio-economic level are more reluctant to do exercise than those on a higher socio-economic level.

TABLE 5.64: IF "YES" TO QUESTION 54, WHAT TYPE OF EXERCISE DO YOU DO? OTHER: (N=55)

	N	%
Cycling	16	29,1
Gymnasium apparatus	11	20,0
Light exercises	4	7,3
Play sport	23	41,8
Rowing	1	1,8
TOTAL	**55**	**100,0**

Variables 77, 78, 79, 80, and 81: If "NO" to question 54, what hampers you from exercising?

Tables 5.65 and 5.66 show that respondents have various reasons for not exercising. It is a concern that the majority of the respondents, 136 (72,3%) indicated that they were just lazy, while 119 (63,3%) indicated that they did not have the time to exercise.

The following analysis shows that:

- The association between the residential area and respondents who indicated that they were just lazy to exercise is statistically significant (p=0,020). The highest incidence of those who are lazy to exercise are

from Bellville South (89,7%), followed by Elsiesriver (79,6%) and Belhar (77,8%).

The researcher identified that respondents who were just lazy to exercise had no specific reason for being lazy, such as being tired, or wanting to relax. Alternatively, the respondents demonstrated a lack of value and a negative attitude towards exercising.

Respondents in occupations associated with higher levels of education have less time for exercise. This could be attributed to the nature of their work. Gender analysis shows that females N=211, 86 (40,8%) have less time for exercising than males N=142, 33 (23,2%). This could be attributed to the fact that females work during the day and still take care of the household chores at the end of a day's work.

Table 5.65 shows that there are respondents N=38, 5 (13,2%) who indicated that they had financial problems. However, in her interviews the researcher identified that this was merely an excuse, as exercising is not associated with money except if a gymnasium is used. There are cheaper modes of exercising as indicated above. Attitudes respondents N=38, 19 (50%) displayed about exercise were "*I just don't like it*", "*I hate exercising*", "*just not interested*". It was clear to the researcher that these respondents place minimal value on regular exercise. A lack of health education exists. N=38, 14 (36,8%) respondents indicated that they were not exercising because of medical reasons. Some indicated that they were suffering from problems such as asthma, others indicated they had had operations, or had been involved in a motor vehicle accident. According to the researcher, the medical conditions of these respondents warranted that they exercise. This indicates these respondents had not received health education on discharge from the institutions where they had received treatment.

In conclusion, exercise is essential for a healthy lifestyle. It promotes the well-being of the individual, influencing all the systems of the body positively (Kozier *et al.* 2000; Smeltzer and Bare, 2000). It is a concern that such a large percentage of the respondents do not exercise regularly. A paradigm shift must occur among respondents to understand and to value the importance of exercising as part of a healthy lifestyle.

TABLE 5.65: IF "NO" TO QUESTION 54, WHAT HAMPERS YOU FROM EXERCISING? (N=188)

Limited or no time available	**N**	**%**
Yes	119	63,3
No	69	36,7
Physically exhausted after work	**N**	**%**
Yes	86	45.7
No	102	54.3
Gymnasiums are too costly	**N**	**%**
Yes	91	48.4
No	97	51.6
Just lazy	**N**	**%**
Yes	136	72.3
No	52	27.7
Other	**N**	**%**
Yes	38	20.2
No	150	79.8

TABLE 5.66: IF "NO" TO QUESTION 54, WHAT HAMPERS YOU FROM EXERCISING? OTHER (N=38)

	N	**%**
Attitude	19	50,0
Financial	5	13,2
Medical	14	36,8
TOTAL	**38**	**100,0**

OPEN QUESTION: What is your understanding of stress?

The reaction to this question was amazing. All the respondents' N=353, immediate reaction was that they had never thought about it before. Each respondent was given time to think before answering. After some thought, the answers varied, but could be categorized into common themes. A response was obtained from each respondent. Table 5.67 shows the categories and the response to each. 51 (14,4%) of the respondents indicated that they had no

understanding of what stress was. The majority, 156 (44,2%) indicated that stress affects the individual emotionally and physically and 110 (31,2%) indicated that being "*under pressure*". 21 (6,0%) indicated that stress is defined as having a "*lot of tension*", a definition closely related to stress. A few respondents 15 (4,2%) indicated that stress is defined as "*getting annoyed or cross quickly*". This category can be associated with stress as it is associated with the behaviour of the individual under stress.

Despite the fact that the majority could not give the researcher a clear definition, 302 (85,6%) of the respondents showed some understanding of stress. The majority associated it with having problems. After obtaining the required data about this particular question, the researcher explained to the respondents what stress was before proceeding to the next question.

TABLE 5.67: WHAT IS YOUR UNDERSTANDING OF STRESS? (N=353)

	N	%
No understanding	51	14,4
Affected emotionally and physically	156	44,2
A lot of tension	21	6,0
Under pressure	110	31,2
Getting annoyed / cross quickly	15	4,2
TOTAL	**353**	**100,0**

Variable 82: Do you experience stress?

When this question was posed and explained, the respondents understood what stress was. Table 5.68 shows the number of respondents who are experiencing stress 282 (79,9%), 71 (20,1%) are not experiencing stress. The association between the age of respondents and those who indicated that they have stress is statistically significant (p=0,023). The age group >21-30years have the highest incidence of stress (76,9%) followed by the age group 41-50years (74,1% and then 31-40 (66,7%). The association between respondents' level of education (schooling) and stress is not statistically significant (p=0,774).

A variety of factors that ultimately influence the health status of an individual

cause stress. In a gender comparison it was identified that 108 (76,1%) males and 174 (82,5%) females experience stress. Excess stress may cause problems such as cardiovascular disease, asthma, and gastro-intestinal problems (Smeltzer and Bare, 2000).

TABLE 5.68: DO YOU EXPERIENCE STRESS? (N=353)

	N	%
Yes	282	79,9
No	71	20,1
TOTAL	**353**	**100,0**

Variables 83, 84, 85,and 86,: If "yes" to question 59, what causes your stress?

Table 5.69 shows that respondents could give more than one answer. Family problems 185 (65,6%) are the main cause of stress in respondents who indicated they have stress. Family problems were associated with financial problems, physical abuse on the part of husbands and the abuse of alcohol by husbands. A number of respondents also indicated that financial problems 184 (65,2%) and work related issues 122 (43,3%) are major contributors to their stress levels. 68 (48,0%) males and 116 (55,0%) females indicated financial problems as a cause of their stress. It was further identified that of the unemployed, N=201, 130 (65,0%) of respondents were stressed and of those without any income N=52, 35 (67,3%) were stressed.

Table 5.70 shows an analysis of responses given under "Other". Unemployment 30 (41,7%) rates the highest. As discussed in paragraph 3.4, research shows that job-loss is highly stressful, characterized as a form of bereavement. According to Bartley (1994) the unemployed tend to be heavier smokers and drinkers. Stress affects physical health further down the line because of chronically increased levels of anxiety.

TABLE 5.69: IF "YES" TO QUESTION 59, WHAT CAUSES YOUR STRESS? (N =282)

Family problems	N	%
Yes	185	65,6
No	97	34,4
Financial Problems	**N**	**%**
Yes	184	65,2
No	98	34,8
Work related issues	**N**	**%**
Yes	122	43,3
No	160	56,7
Other	**N**	**%**
Yes	72	25,5
No	210	74,5

TABLE 5.70: IF "YES" TO QUESTION 59, WHAT CAUSES YOUR STRESS? OTHER: (N=72)

	N	%
Crime	8	11,1
Health Problems	7	9,7
Personal	11	15,3
Relationships	16	22,2
Unemployment	30	41,7
TOTAL	**72**	**100,0**

Variables 87, 88, 89, and 90: If "Yes" to question 59, how do you manage your stress?

Tables 5.71 and 5.72 show that respondents have a variety of ways of managing their stress. It is a concern to note that there are 49 (20,4%) respondents that suppress their stress with the use of illegal drugs, sedatives, food, and by smoking cigarettes. A meaningful number of respondents, 313 (88,7%) indicated passive ways, such as reading, watching television, listening to music, also seen as ineffective ways of managing their stress.

The researcher is concerned that the stress experienced by respondents is not being managed effectively. The implications of this can lead to psychosomatic diseases; this is further aggravated by the passive behaviour demonstrated as a means of managing stress. Consequently, the passive behaviour may cause an increase in body mass, and together with high stress levels, the respondent could increase the incidence for the development of a cardiovascular disease (Smeltzer and Bare, 2000).

TABLE 5.71: HOW DO YOU MANAGE YOUR STRESS? (N=282)

Spending some time in the garden	**N**	**%**
Yes	100	35,5
No	182	64,5
Reading a book	**N**	**%**
Yes	183	64,9
No	99	35,1
Socializing with friends	**N**	**%**
Yes	196	69,5
No	86	30,5
Other	**N**	**%**
Yes	240	85,1
No	42	14,9

TABLE 5.72: IF "YES" TO QUESTION 59, HOW DO YOU MANAGE YOUR STRESS – OTHER? (N=240)

	N	**%**
Domestic chores	15	6,25
Family activities	7	2,9
Hobbies (27) and Sport (46)	73	30,4
Passive activities for example Watching television and videos (97), listening to music (19), sleeping (14)	130	54,1
Spiritual activities	16	6,7
Talking to someone / Staying calm / Crying	36	15,0
Consuming alcohol (6); food (2); sedatives (3); smoking cigarettes (31) marijuana and mandrax (7)	49	20,4

Variable 91: Do you have a social support system when stressed?

Table 5.73 shows that 293 (83,0%) have a social support system to rely on when stressed. It is disheartening to note that 60 (17,0%) do not have a support system. Social support is essential when someone is stressed as it assists and facilitates an individual's coping skills. Emotional support from family and significant others, provides such an individual with love and a sense of sharing the burden (Smeltzer and Bare, 2000).

On the contrary, individuals with inadequate support networks sometimes allow themselves to become increasingly ill before they confirm their illness or seek medical attention. Those individuals with support systems also receive a stimulus to recover (Kozier *et al.*, 2000).

TABLE 5.73: DO YOU HAVE A SOCIAL SUPPORT SYSTEM WHEN STRESSED? (N=353)

	N	%
Yes	293	83,0
No	60	17,0
TOTAL	**353**	**100,0**

Variables 92, 93, 94, 95, and 96: If "yes" to question 62, specify your support system.

Table 5.74 shows a complete analysis of support systems respondents have when stressed. There are respondents that have more than one type of support system. Only 199 (67,9%) respondents enjoy family support, which included brothers, sisters and parents but not the spouse. 94 (32,1%) have indicated that the family does not provide a support system for them. The researcher further identified that 160 (54,6%) individuals received no support from their spouses. The female respondents spontaneously referred to their husbands as being the cause of their stress. The males indicated that they could not speak to their wives.

The researcher is concerned that there are respondents who do not enjoy the

support of their families, 94 (32,1%). Furthermore, 160 (54,6%) of spouses do not have the support of their spouses. To have the support of your spouse makes marriage more meaningful, subsequently, a decrease in separation and divorce may result.

Stress may have a negative influence on the health status of an individual. It is therefore of the utmost importance that support groups, support services and marriage counselling are introduced into the suburbs as part of the community services.

TABLE 5.74: IF "YES" TO QUESTION 62, SPECIFY YOUR SUPPORT SYSTEM (N=293)

Family	**N**	**%**
Yes	199	67,9
No	94	32,1
Spouse	**N**	**%**
Yes	133	45,4
No	160	54,6
Friends	**N**	**%**
Yes	203	69,3
No	90	30,7
Colleagues at work	**N**	**%**
Yes	71	24,2
No	119	40,6
Do not work	103	35,2
Other	**N**	**%**
Yes: Reaching out to others (6); Spiritual support (78)	84	28.7
No	209	71,3

Variable 97: Do you have leisure / free time for yourself?

Table 5.75 shows that the majority of the respondents 325 (92,1%) do have leisure or free time, a time when the respondents relax. However, there is also a considerable number of respondents who do not have free time, 28 (7,9%). The association between leisure time and the diastolic blood pressure of the

respondents (p=0.9) or systolic blood pressure (p=0,7) is not statistically significant.

TABLE 5.75: DO YOU HAVE LEISURE /FREE TIME FOR YOURSELF? (N=353)

	N	%
Yes	325	92,1
No	28	7,9
TOTAL	**353**	**100,0**

Variables 98, 99, 100, 101, and 102: If "yes" to question 64, what do you do during your leisure / free time?

A variety of activities is shown in table 5.76 with reference to what the respondents do during their leisure/free time. The table shows that 268 (82,5%) respondents also responded to "*other*". Table 5.77 shows that respondents spend their leisure time doing a variety of activities. Each respondent has more than one activity. It is worth noting that 137 (51,1%) of respondents watch television and videos, a very passive activity, while 26 (9,7%) indicated that they sleep during their leisure time. The implications of this passive type of behaviour lead to an increase in body mass, ultimately increasing the risk for cardiovascular disorders. This behaviour can be associated with Afro-Americans as discussed in paragraph 3.6.

Myers *et al.* (1995) found that exercise among African-Americans is limited. Recent data shows that this sedentary pattern is established early in life and is dominated by excessive television watching. It is consequently passed on from generation to generation. The combination of poor dietary habits, limited exercise and prevalence of obesity constitutes a major health risk complex for African-Americans. These individuals are certainly at a high-risk to develop cardiovascular diseases. Smeltzer and Bare (2000) validate this statement. Afro-Americans currently have the highest cardiovascular disease incidence in the United States of America (Smeltzer and Bare, 2000). The respondents show a similar tendency to that of Afro-Americans. The majority enjoy socializing 252 (77,5%) and this is accompanied in most cases with the consumption of alcohol and smoking. They follow a sedentary lifestyle. Respondents do not exercise

vigorously at least three times per week (70%), indulge in passive activities 282 (79,9%) which are associated with excessive television-watching, listening to music, "sitting around", reading and sleeping. It was identified that the majority of the respondents are overweight 194 (55,1%). Therefore, high-risk behaviour of this nature increases the risk for cardiovascular disorders. This is supported in the literature as discussed in paragraphs 3.2 and 3.6.

Despite the negative behaviour, a large number of respondents are also involved in physically active activities such as enjoying a sport 83 (25,5%), gardening 130 (40%), and enjoying a hobby, 11 (36%). However, the negative behaviour dominates and may influence the health status negatively.

TABLE 5.76: IF "YES" TO QUESTION 64, WHAT DO YOU DO DURING YOUR LEISURE/FREE TIME? (N=325)

Enjoy a hobby	**N**	**%**
Yes	117	36,0
No	208	64,0
Socializing	**N**	**%**
Yes	252	77,5
No	73	22,5
Enjoy a sport activity	**N**	**%**
Yes	83	25,5
No	242	74,5
Gardening	**N**	**%**
Yes	130	40,0
No	195	60,0
Other	**N**	**%**
Yes	268	82,5
No 57	57	17,5

TABLE 5.77: IF "YES" TO QUESTION 64, WHAT DO YOU DO DURING YOUR LEISURE/FREE TIME? OTHER (N=268)

	N	%
Community work in squatter camps	3	1,1
Drinking alcohol and smoking	3	1,1
Domestic chores	20	7,5
Family activities	10	3,7
Hiking and "*walking around*"	38	14,2
Watching television and videos	137	51,1
Listening to music	23	8,6
Sleeping	26	9,7
"Sitting around in the sun"	8	3,0
Reading	88	32,8
Shopping / Timeout	25	9,3
Spiritual activities	4	1,5

Variables 103, 104, 105, and 106: If "NO" to question 64, why do you have no leisure / free time?

Table 5.78 shows the reasons why respondents do not have leisure/free time. Heavy daily schedules, 27 (96,4%) dominated all the reasons. Many respondents had more than one reason that aggravated their circumstances. Ultimately this may contribute to an increase in their stress levels.

In conclusion, as described in the literature paragraph 3.2. factors do exist that influence the lifestyle of an individual that may include social habits, diet, exercise, leisure time, and stress management. In the above sections the prevalence of these factors influencing the health status of the Coloured people have been determined and significant associations have been shown with the use of the chi-square statistical test.

TABLE 5.78: IF "NO" TO QUESTION 64, WHY DO YOU HAVE NO LEISURE/FREE TIME? (N=28)

Heavy daily work schedules	**N**	**%**
Yes	27	96,4
No	1	3,6
Single parent with a family	**N**	**%**
Yes	7	25,0
No	7	25,0
Not applicable	14	50,0
Forced to work and still take care of the household chores	**N**	**%**
Yes	17	60,7
No	4	14,3
Not applicable	7	25,0
Other	**N**	**%**
Yes: Community work and professional activities (3); Family commitments (4)	7	25
No	21	75,0

5.6 SECTION E: ETHNO-CULTURAL BELIEFS: HEALTH AND ILLNESS

Variable 264: Open Question: What is your understanding of health?

Various answers were given but with common themes, these were then categorized as shown in table 5.79. Table 5.79 reveals the analysis of the respondents' understanding of "*health*". A significant number of 60 (17%) respondents have no understanding of the concept health. It is however, gratifying to note that the majority have an idea of what health is about. 139 (39,4%) respondents refer to *"...practising a healthy lifestyle ..."* the behaviours that need to be practised in order to enjoy good health. 24 (6,8%) respondents believe that health is, "*Physical and mental well-being, body functions normally*". This is almost in line with the definition as defined by the WHO (1947), namely *"a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity*".

Another group 54 (15,6%) indicated that health is "*to be free from pains, diseases, illnesses, operations, no defects and allergies*".

The results below show the lifestyle being practised with reference to those who indicated that health is *"... practising a healthy lifestyle*" N=139. The results of the following indicators are gives: consumption of alcohol, smoking and eating habits:

- 96 (69,1%) always avoid alcohol compared to 34 (24,5%) who never avoid alcohol use, 9 (6,5%) sometimes avoid it. The association between the consumption of alcohol and the health beliefs is not statistically significant (p=0,518)
- 70 (50,4%) always avoid smoking while 67 (48,2%) never avoid smoking, 2 (1,4%) sometimes avoid smoking. The association between smoking and the health beliefs is not statistically significant (p=0,148)
- 74 (53,2%) always have a variety of foods per day such as fruit, vegetables, whole grains bread, cereals, lean meats, dairy products while 24 (17,3%) almost never, 41 (29,5%) sometimes have a variety of foods per day. The association between the consumption of variety of foods and the health beliefs is statistically significant (p=0,024)
- 77 (55,4%) almost always limit the amount of fat, saturated fat, and cholesterol intake, while 34 (24,5%) never limit their fats, and 2 (20,1%) sometimes limit their fat intake. The association between the consumption of fat and the health beliefs is not statistically significant (p=0,688)
- 65 (46,8%) always limit their sugar intake, 44 (31,7%) almost never limit their sugar intake, 30 (21,6%) sometimes limit their sugar intake. The association between the consumption of sugar and the health beliefs is not statistically significant (p=972).
- 91 (65,5%) almost always limit their salt intake, 27 (19,4%) never limit their salt intake, while 2 1(15,1%) sometimes limit their salt intake. The association between the consumption of salt and the health beliefs is statistically significant (p=039).

The objective test measurements show the following:

- 33 (23,7%) and 32 (23%) have an increased diastolic and systolic pressure respectively. The association between the diastolic and health beliefs is not statistically significant (p=0,140). The association between systolic pressure and health beliefs is also not statistically significant (p=0,205).

- cholesterol values show that 44 (31,7%) are moderate risk for cardiovascular disease, 3 (2,2%) are high-risk and (1,4%) are very high-risk . The association between the cholesterol values and the health beliefs is not statistically significant (p=0,657).
- 80 (57,6%) and 11 (7,9%) are over-weight and under-weight respectively. The association between the weight and height and the health beliefs is not statistically significant (p=0,774)
- 38 (27,3%) were referred to a doctor for problems that were identified. The association between the referral to a doctor and the health beliefs is not statistically significant (p=0,377)

It is noteworthy that more respondents between 21 and 30 years, 61 (50,0%) referred to health as practising a healthy lifestyle in comparison to the age groups 31-40 years, 50 (37,3%) and 41-50 years 28 (28,9%). This is meaningful for the population as the younger people are beginning to understand what good health is about. The association between age and health beliefs is not significant (p=0,110). The association between gender and health beliefs is not significant (p=0,477).

The results show that despite the knowledge about their understanding of health *"... practising a healthy lifestyle"*, some respondents are not practising a healthy lifestyle. This could be attributed to a lack of health education with reference to a few examples: what constitutes a balanced meal, how a meal can be balanced on a low income.

The researcher also identified a lack of understanding of the value attached to practising a healthy lifestyle. They show a lack of concern about the long-term consequences of high-risk behaviour. Many would laugh and remark that *"... health is not drinking, smoking but I do it ..."* despite that respondents indicated that health is *"... practising a healthy lifestyle"*.

Despite their health beliefs many respondents cannot practise a healthy lifestyle because of their socio-economic circumstances. The following data show:

- 76 (54,7%) of these respondents N=139 are unemployed. The association between employment and the health beliefs is statistically significant (p=0,037)
- 26 (18,7%) of the respondents N= 139 have no source of income. The association between source of income and the health beliefs is not

statistically significant (p=0,305)

- 93 (66,9%) of the respondents N=139 earn R3000 and less per month. The association between income and the health beliefs is statistically significant (p=0,003)

The association between employment and health beliefs is significant (p=0,037) Among the unemployed, emphasis is placed on religious views, followed by "*feeling good to work*" and thirdly "*looking after the body and caring for it*". Among the employed emphasis is placed on physical and mental well-being, followed by practising a healthy lifestyle and thirdly, to be free from pains, diseases and illnesses. The association between income and health beliefs is significant (p=0,003). Because of the same responses to income and unemployment, this validates the association between employment and health beliefs.

The following indicators, blood pressure, mass, cholesterol, consumption of alcohol and smoking are used to determine if there is an association between what the respondents believe about health "*Looking after the body and caring for it*" N=35:

Blood pressure: Diastole:
Normal diastolic pressure: 23(65,7%)
Below normal: 3(8,6%)
Above normal: 9(25,7%

Systolic:
Normal systolic pressure:26(74,3%)
Below normal pressure: 1(2,9%)
Above normal: 8(22,9%)

Body Mass:

Normal mass:	16	(45,7%)
Underweight:	2	(5,7%
Overweight:	17	(48,6%)

Serum Cholesterol:	Normal	21(60%)
	Moderate risk	13(37,1%)
	High-risk	1(2,9%)

- The consumption of alcohol shows that 13 (37,1%) almost never avoid the consumption of alcohol, while 1 (2,9%) indicated that sometimes they will avoid alcohol and 4 (11,4%) almost always avoid alcohol. However, 17(48,6%) of the respondents indicated that they never consume alcohol.

The association between the consumption of alcohol and the health beliefs is not statistically significant (p=0,264)

- The majority of these respondents avoid smoking. The results show that 20 (57,1%) almost always avoid smoking, 13 (37,1%) never smoke, and only 2 (5,7%) almost never avoid smoking. The association between the smoking and the health beliefs is not statistically significant (p=0,228)

The other themes listed in table 5.79 do not show any relevance.

TABLE 5.79: WHAT IS YOUR UNDERSTANDING OF HEALTH? (N=353)

	N	%
No understanding	60	17
"Physical and mental well-being, body functions normally"	24	6,8
"...To be free from pains, diseases, illnesses, operations, no defects and allergies"	54	15,3
"Feeling good to do work"	33	9,4
Practising a healthy lifestyle – exercising, balanced eating habits, no smoking and alcohol use, visiting the doctor regularly	139	39,4
"Looking after the body and caring for it"	35	9,9
Religious view- "Believing in God is good health"	8	2,3
TOTAL	**353**	**100,0**

Variable 268: Open Question: Are there any ethno-cultural beliefs, which you relate to your health for example Xhosa males must be initiated in order to become a "man"?

Table 5.80 shows a complete analysis of the respondents' cultural beliefs, which they relate to health. The majority of the respondents 186 (52,7%) indicated that they had no such beliefs. However, 134 (38,0%) indicated that it is a group of people "*who love to eat and to share with others*" The following results show a comparison between those who have no cultural beliefs N=186 (52,7%) and those who believe that the Coloured people "*love to eat*" 134 (38,0%).

- Respondents who believe that the Coloured people love food 69 (51,5%) almost always have a variety of foods each day, such as fruits and vegetables, whole grain breads, cereals, lean meats and dairy products while those who have no beliefs 105 (51,5%) have a variety of foods as described. The association between the variety of foods and ethno-cultural beliefs is not statistically significant (p=0,078)
- Respondents who believe that the Coloured people love food 41 (30,6%) almost never limit the amount of fats, saturated fat and cholesterol and 51 (27,4%) who have no beliefs almost never limit their fat intake as described. The association between fats and ethno-cultural beliefs is statistically significant (p=0,001)
- Respondents who believe that the Coloured people love food 50 (37,3%) almost never avoid sugar and those who have no beliefs 52 (27,4%) almost never avoid sugar. The association between the use of sugar and ethno-cultural beliefs is not statistically significant (p=0,077)

Objective tests show the following:

- Respondents who believe that the Coloured people love food, 52 (38,8%) respondents have increased diastolic pressures and of those who have no beliefs 55 (29,6%) have increased diastolic pressures. The association between the diastolic blood pressure and ethno-cultural beliefs is not statistically significant (p=0,254)
- Respondents who believe that the Coloured people love food, 41 (30,6%) respondents show increased systolic pressures, and those who have no beliefs 47 (25,3%) respondents have increased systolic pressures. The association between the systolic blood pressure and ethno-cultural beliefs is statistically significant (p=0,042)
- Respondents who believe that the Coloured people love food, 43 (32,1%) respondents' cholesterol values show a moderate risk for cardiovascular disease: 5 (3,7%) high-risk
  2 (1,5%) very high:

  while those respondents who have no beliefs show the following cholesterol values:

  51 (27,6%) moderate risk, for cardiovascular disease:
  6 (3,2%) high-risk
  1 (0,5%) very high

The association between the cholesterol and ethno-cultural beliefs is statistically significant (p=0,001)

- Of respondents who believe that the Coloured people love food the majority of respondents, 72 (53,7%) are overweight and those who have no beliefs 102 (55,1%) are overweight. The association between the weight and height and ethno-cultural beliefs is not statistically significant (p=0,904)

However, more respondents of the more middle-upper class associated with higher levels of education, 76 (61,8%) have no cultural beliefs, compared with that of the lower socio-economic levels 61 (45,9%), formal housing, and 49 (50,6%) informal housing. Fewer respondents of the middle-upper socio-economic level believe that the cultural belief is eating a lot of food and sharing with others than that of the low socio-economic levels. The association between the educational level and ethno-cultural beliefs is not statistically significant (p=0,619)Two of the themes were discussed and there is an association between those respondents who believe that the Coloured people love food, N=134 (38%) and their health status. The other themes listed in the table do not show any particular relevance. The association between the socio-economic level and ethno-cultural beliefs is statistically significant (p=0,028)

TABLE 5.80: ARE THERE ANY ETHNO-CULTURAL BELIEFS, WHICH YOU RELATE TO YOUR HEALTH FOR EXAMPLE XHOSA MALES MUST BE INITIATED TO BECOME A "*MAN*"? (N=353)

	N	%
No beliefs	186	52,7
Poor community support	15	4,3
No goals	1	0,3
Like food and to share with others	134	38
Satisfied with one wife	2	0,6
Family bonding, caring for the elderly	15	4,3

Variable 107: Do you have any objections, from a cultural point of view, to receiving any sort of medical treatment?

The majority of the respondents 347 (98,3%) have no objections from a cultural point of view, to receiving any sort of medical treatment as shown in table 5.81.

TABLE 5.81: DO YOU HAVE ANY OBJECTIONS TO RECEIVING ANY SORT OF MEDICAL TREATMENT? (N=353)

	N	%
Yes	6	1,7
No	347	98,3
TOTAL	**353**	**100,0**

OPEN QUESTION: If "yes" to question 69, please explain

The objections respondents have about receiving medical treatment are listed in table 5.82. These objections are not culturally related but more personally related.

TABLE 5.82: IF "YES" TO QUESTION 69, PLEASE EXPLAIN (N=6)

	N	%
No belief in medications	3	50
Sceptic about blood transfusions because of AIDS	3	50
TOTAL	**6**	**100**

Variable 108: Is it your belief to first self-medicate any illness before seeing a medical doctor?

A significant number of respondents, 303 (85,8%) have indicated that their belief is to first self-medicate any illness before they see a doctor as shown in table 5.83. A gender association shows that of those who self-medicate an illness before consulting a doctor, 119 (83,8%) are males and 184 (87,2%) are females. According to the researcher, this could possibly be acceptable for minor problems such as a cold, but can be problematic if patients continue to treat themselves when medical attention is essential. It was identified in a previous study on laryngectomy patients for a master's degree, that despite the treatment, patients had a poor prognosis after surgery, because treatment was introduced much too late (Stellenberg, 1995).

TABLE 5.83: IS IT YOUR BELIEF TO FIRST SELF-MEDICATE ANY ILLNESS BEFORE SEEING A MEDICAL DOCTOR? (N=353)

	N	%
Yes	303	85,8
No	50	14,2
TOTAL	**353**	**100,0**

Variables 109, 110, 111, 112, 113, 114, and 115: If "yes" to question 71, how do you treat yourself?

Table 5.84 shows that the majority of respondents have responded to a variety of treatment measures. The majority 268 (88,4%) use off the shelf-medication, closely followed by home remedies such as herbs, 242 (79,9%) and folk medicine 156 (51,5 %). An insignificant number of respondents make use of a herbalist 6 (2,0%), "medicine man/woman" 4 (1,3%), and a chiropractitioner 4(1,3%). A further analysis shows that 99 (69,7%) males and 143 (67,8%) females are using home remedies such as herbs, of which 82 (67,2%) males and females are between the ages of 21-30, 86 (64,2%); age group 31-40 years and 74 (76,3%) for age group 41-50 years. A significant increase is seen at the age of 41-50 years.

An analysis of users of off the shelf-medication shows that 96 (78,7%) of users are between the ages 21-30, 94(70,2%) of the age group 31-40 and 78 (80,4%) of the age group 41-50 years. The highest percentage of users are at the age group of 41-50 years, this could be attributed to the fact that physical problems that affect the body become more prominent in this age group.

Many reasons that force the respondent to use off the shelf medication, folk medicine, and home remedies such as herbs, exist. These are less expensive and more readily available than the more sophisticated measures. Respondents, 169 (47,9%) have indicated that medical costs are expensive and not affordable. Only 73 (20,7%) of the respondents have medical aid fund insurance while 280 (79,3%) must find less expensive ways of treating them as listed in table 5.85. The costs of medical services are further aggravated by the inaccessibility of medical services to respondents 150 (42,5%), as discussed in 5.10.

TABLE 5.84: IF "YES" TO QUESTION 71, HOW DO YOU TREAT YOURSELF? (N=303)

Using home remedies such as herbs	**N**	**%**
Yes	242	79,9
No	61	20,1
Using off the shelf medication	**N**	**%**
Yes	268	88,4
No	35	11,6
Visit a "medicine woman/man"	**N**	**%**
Yes	4	1,3
No	299	98,7
Using folk medicine	**N**	**%**
Yes	156	51,5
No	147	48,5
Visit a herbalist	**N**	**%**
Yes	6	2,0
No	297	98,0
Visit a chiropractitioner	**N**	**%**
Yes	4	1,3
No	299	98,7
Other	**N**	**%**
Yes: *"Consult the professional nurse at work"* (1); *"Consume citrus fruit"* (1) *"Drink sugar water when I get a headache"*; (1) *"Use of spiritual support* (1)	4	1,3
No	299	98,7

Variable 267: Open Question: What is your understanding of illness?

Spector, (1996) defines illness as a "*state of imbalance among the body, mind, and spirit; a sense of disharmony both within the person and the environment*" DeLaune and Ladner (1998) explain that illness *"... means different things to different people"*. This is also seen in this analysis. Table 5.85 shows an analysis of the responses obtained from 353 respondents. A variety of interpretations have been obtained and categorized into common themes. 68 (19,3%) indicated that they have no idea, while the majority 285 (80,7%) have indicated some understanding of illness.

TABLE 5.85: WHAT IS YOUR UNDERSTANDING OF ILLNESS? (N=353)

	N	%
No understanding	68	19.3
Physical and mental imbalance: Illness is a disease	37	10,5
"... Don't feel well, have headaches, cough ..." When you are sick/having pain / being bedridden	210	59,5
Under a doctor's treatment	6	1,7
All in the mind	5	1,4
"*Illness is when you don't eat correctly*"; smoke, drink alcohol, breathing in germs; unhygienic conditions	27	7,6
TOTAL REPONSES	**353**	**100,0**

In this section, the researcher investigated and explored possible ethno-cultural beliefs that the respondents relate to their health and illness. There are no peculiar or extraordinary beliefs about health or illness. However, the researcher is concerned that the value attached to a healthy lifestyle is not as desired. It was further identified that a significant number of respondents (38%) believe that Coloured people *"... love to eat"*. An association between those respondents who believe that the Coloured people love to eat, (38%) and their health status does exist. The health status of the respondents is influenced negatively because of the dietary habits of respondents as described above. The majority (85,8%) of respondents believe that they should first self-medicate an illness before consulting a doctor. This may result in delayed health seeking behaviour, which may influence the health status negatively.

The hypotheses that "There is an association between the health status and ethno-cultural beliefs of the Coloured people of the Western Cape" as defined can be seen as described in paragraph 5.6. The same for the association between the health status and the health beliefs of the Coloured people of the Western Cape as defined.

5.7 SECTION F: RELIGIOUS BELIEFS INFLUENCING HEALTH

Variable 265: Open Question: What are your religious beliefs about health?

An overwhelming response was received with reference to this question. Answers were spontaneous. Table 5.86 shows that the majority of the respondents are religious and relate health to religion. 289 (81,9%) respondents believe that the *"... body is the temple of God, a gift from God, you must look after it, and believe. You must pray for your health*". The majority of the respondents do practice what they believe. The following statistics substantiate these beliefs: N=289

- 143 (49,5%) respondents almost always avoid smoking, 2 (0,6%) sometimes smoke
- 193 (66,8%) almost always avoid drinking alcohol
- 158 (54,7%) almost always limit their fat intake
- 179 (61,9%) almost always limit their salt intake
- 166 (57,4%) almost always eat a variety of foods per day

64 (18,1) respondents have indicated that they have no beliefs related to religion. It seems as if the health behaviours of the majority as described above, are positively influenced by religion.

The association between the current smokers and religious beliefs about health is statistically significant (0,012).

The association between the objective measurements and the religious beliefs about health is not statistically significant.

- Diastole (p=0,235)
- Systole (p=0,855)
- Haemoglobin (p=0,651)
- Blood glucose (p=0,284)
- Cholesterol (p=0,451)
- Height and weight (p=0,733)

TABLE 5.86: WHAT ARE YOUR RELIGIOUS BELIEFS ABOUT HEALTH? (N=353)

	N	%
No beliefs	64	18,1
Religious beliefs: the body is the temple of God; a gift from God, you must look after the body, pray for your health / have faith be strong	289	81,9
TOTAL	**353**	**100,0**

Variable 5.116: Do you have any objections from a religious point of view about receiving medical treatment?

"*Medical treatment*" was explained to the respondents with a few examples such as receiving blood, contraceptives, receiving any transplant organ, when this question was asked.

Table 5.87 shows that the majority of respondents 329 (93,2%) have no objections from a religious point of view to receiving any sort of medical treatment. Only 24 (6,8%) have indicated that they do have objections.

TABLE 5.87: DO YOU HAVE ANY OBJECTIONS FROM A RELIGIOUS POINT OF VIEW ABOUT RECEIVING MEDICAL TREATMENT (N=353)

	N	%
Yes	24	6,8
No	329	93,2
TOTAL	**353**	**100,0**

OPEN QUESTION: If "yes" to question 75, specify these objections

Table 5.88 shows that there are respondents 21 (87,5%), who do not believe in using the intra-uterine device, are against abortion on demand and family planning 3 (12,5%). The researcher identified that respondents viewed the intra-uterine device as equivalent to an abortion.

It appears that the respondents do not have objections to actual medical

treatment, but have ethical reservations pertaining to religion.

TABLE 5.88: IF "YES" TO QUESTION 75, SPECIFY THESE OBJECTIONS (N=24)

	N	%
Object to family planning	3	12,5
Object to IUD and abortion on demand	21	87,5
TOTAL RESPONSES	**24**	**100,0**

Variable 117: Do you have to consult with your religious leader before receiving medical treatment such as surgery?

Table 5.89 shows that the majority, 305 (86,4%) indicated that they need not consult with their religious leader before any sort of treatment. A few respondents 23 (6,5%) indicated to the researcher that the doctor has been sent by God to help man.

TABLE 5.89: DO YOU HAVE TO CONSULT WITH YOUR RELIGIOUS LEADER BEFORE RECEIVING MEDICAL TREATMENT SUCH AS SURGERY? (N=353)

	N	%
Yes	48	13,6
No	305	86,4
TOTAL	**353**	**100,0**

Variable 266: Open Question: What are your religious beliefs about illness?

All the respondents responded to this question. Answers were categorized into common themes. Table 5.90 shows that 150 (42,5%) respondents indicated that there is no relationship between illness and religion. Illness, according to the respondents is brought about through high-risk behaviours. Despite the fact that 289 (81,9%) believe that there is a relationship between religion and health as discussed in this section, fewer respondents, 203 (57,5%) believe that there is a relationship between religion and illness. Religion has a positive effect on the health status of the respondents as described above.

The association between the respondents who have history of smoking and the religious beliefs about illness are statistically significant (p=0,024). The association between the respondents who currently smoke and the religious beliefs about illness are statistically significant (p=0,006).

The association between the respondents who is consuming alcohol and the religious beliefs about illness is statistically significant (p=0,001). The association between the use of salt and religious beliefs about the illness is statistically significant (p=0,021).

The association between the following objective test measurements and religious beliefs about illness are not statistically significant

- Diastolic blood pressure (p=0,240)
- Systolic blood pressure (p=0,563)
- Blood glucose level (p=0,359)
- Cholesterol (p=0.840)
- Height en weight (p=0,075)

TABLE 5.90: WHAT ARE YOUR RELIGIOUS BELIEFS ABOUT ILLNESS? (N=353)

	N	%
No beliefs, no relationship between illness and religion; Illness is your own negligence, brought about by high-risk behaviours such as smoking, abuse alcohol.	150	42,5
Religious beliefs such as illness is in God's hands, God's speaking to you, satanic powers cause illness	203	57,5
TOTAL	**353**	**100,0**

In conclusion, spiritual and religious beliefs can influence lifestyle, attitudes and feelings about illness and death (Kozier *et al.,* 1995). Religion may influence or prescribe specific practices about the diet of an individual, birth control, appropriate medical therapy, and the proper care of the dying or the dead (Kozier *et al.,* 1995; Spector, 1996). The study shows that there are no extreme and bizarre ideas about health and illness.

An association between the health status and religious beliefs of the majority of the respondents has been identified. Religious beliefs influence the health status

of the respondents positively. In her interviews the researcher identified that the respondents (42,5%) were adamant that illness is brought about by high-risk behaviour. Reference to any objections about receiving medical treatment and having to consult with a minister before treatment is given, is insignificant.

The hypothesis is accepted "There is an association between the health status and religious beliefs of the Coloured people of the Western Cape" as defined.

5.8 SECTION G: ENVIRONMENTAL FACTORS

Variable 118: Do you have any troubling environmental problems influencing your health for example air pollution, etcetera?

According to the Bill of Rights in the constitution of the Republic of South Africa, (Act 108 of 1996) "*Everyone has the right to an environment that is not harmful to their health or well-being … .*" " *Legislation should be in place to prevent pollution and ecological degradation …*".

Despite the Bill of Rights table 5.91 shows that the majority of respondents, 292 (82,7%) have environmental problems influencing their health, 112 (78,9%) males and 180 (85,3%) females. Respondents with environmental problems are from all socio-economic levels namely, upper-middle socio-economic level, 89 (72,4%); 115 (86,5%) from the lower socio-economic (formal housing) and 88 (90,7%) from informal housing sector.

TABLE 5.91: DO YOU HAVE ANY TROUBLING ENVIRONMENTAL PROBLEMS INFLUENCING YOUR HEALTH FOR EXAMPLE AIR POLLUTION, ETCETERA? (N=353)

	N	%
Yes	292	82,7
No	61	17,2
TOTAL	**353**	**100,0**

Variables 119, 120, 121, 122, and 123: If "yes" to question 77, please specify.

Table 5.92 shows a variety of environmental problems to which respondents are exposed, and that may affect their health. 232 (79,5%) of respondents indicated that crime is a problem to them, the literature and the daily newspapers and news bulletins that indicated that crime is a problem, support this finding. Respondents explained that it is sometimes a risk to stand in front of their homes, as they fear that a stray gunshot bullet may hit them, many fear that they would be sexually assaulted if they go out onto the roads, many feared the gangsters who at times demands "*protection money*". These statements are supported by the National Serious Crime Picture (1998) that shows how crime problems affected the social fabric for the period January to June 1998. A few examples of crimes are listed namely:

1. Western Cape Eastern Metro:
   - Rape: 904
   - House Breaking: 6249
   - Common Assault: 5080
2. Western Cape Western Metro:
   - Rape: 784
   - House Breaking: 8123
   - Common assault: 4616

The association between the residential area and crime as an environmental problem is statistically significant (p=0,015).

A significant number of respondents indicated that noise, 188 (66,7%) and air pollution, 198 (66,7%) are problematic. Shebeens and local discos are among the most common causes of noises in the low socio-economic areas. The association between the residential area and crime as an environmental problem is statistically significant (p=0,015). The highest incidence occurring in Belhar (92,3%) followed by Ravensmead (89,4%) and Kraaifontein (79,2%).

The association between the socio-economic level and noise pollution as an environmental problem is statistically significant (p=0,029). The highest incidence is among the lower socio-economic informal level (72,7%) followed by the lower socio-economic formal level (66,1%) and upper-middle level (53,9%).

The association between the residential area and air pollution as an

environmental problem is statistically significant (p=0,001). The highest incidence occurring in Bellville South (91,7%) followed by Kuilsriver (72,7%) and Belhar (69,2%).

TABLE 5.92: IF "YES" TO QUESTION 77, PLEASE SPECIFY (N=291)

Crime	**N**	**%**
Yes	232	79,5
No	60	20,5
Noise pollution	**N**	**%**
Yes	188	66,4
No	104	35,6
Air pollution	**N**	**%**
Yes	198	67,8
No	94	32,2
Heavy traffic	**N**	**%**
Yes	144	49,3
No	148	50,7
Other	**N**	**%**
Yes	126	43,2
No	166	55,8
TOTAL	**292**	**100,0**

Table 5.92 shows that 126 (43,2%) respondents responded to "*other*". The various environmental problems are listed in table 5.93. It is a concern to note the poor environmental conditions, under which respondents live. 114 (90,5%) of these respondents N=126, indicated that they live in an unhygienic environment. They complained that the municipalities were not cleaning the environment as expected, for example dead animals sometimes lie around and dumps of dirt are found all over the environment. The researcher substantiates these problems as identified as they were observed during the fieldwork.

In one particular residential area, 32 (25,4%) respondents complained about the chemical fumes from factories nearby. The researcher can also verify this problem as she spent a few days in the area and experienced strong chemical fumes coming from a factory very close to where people lived. 10 (7,9%) of

respondents complained of poor housing with damp walls and wet ceilings. The researcher can also verify this problem as the walls were wet when touched and water droplets were observed on the inside of the roof.

TABLE 5.93: IF "YES" TO QUESTION 79, PLEASE SPECIFY: OTHER: (N=126)

	N	%
Chemical fumes from nearby factories (28=7,9%); Smells from nearby pig farm (4=2,3%)	32	25,4
Unhygienic environment: blocked drains (9=7,9%); dead animals lying around (5=4,4%); dumps of dirt lying around (79=69,3%); no toilets, dispose own faeces and urine (5=4,4%); dirty standing water breeding mosquitoes (16=14,%)	114	90,5
Poorly built houses with damp walls	10	7,9
Unsafe environment: people just loitering (5=1,4%); people with tuberculosis and spitting carelessly (6=1,7%); Poor street lighting promotes crime (6=1,67%)	17	13,5
Overpopulated areas	2	1,6

In conclusion, according to the literature an individual's physical environment, which includes housing and sanitation facilities, may affect the health of an individual. Air, food, and water pollutants are often directly or indirectly related to various types of illness. The environment of an individual of low socio-economic level or in poverty-stricken areas also has a bearing on overall health. Slum neighbourhoods are overcrowded and in a state of deterioration. Infrastructure that includes sanitation, water supply, roads and removal of waste is poor. Garbage may be strewn all over, and the area infested with rats. Social pathologies such as crime, sexual assault are constant threats (Kozier *et al.*, 1995; Vlok, 1991).

As described in the literature (see paragraph 3.4), the environments in which the majority of the respondents live, regardless of socio-economic levels, are not conducive to health.

5.9 SECTION H: HEALTH SERVICES

Variables 124, 125, 126, 127, and 128: What type of health service do you use?

Table 5.94 shows a complete analysis of the types of services the respondents are currently using. The respondents have indicated that they use a variety of health services. If the respondents' financial circumstances permit it, a private doctor is consulted, otherwise the day hospital or state health clinic is used.

TABLE 5.94: WHAT TYPE OF HEALTH SERVICE DO YOU USE? (N=353)

State Health Clinic	N	%
Yes	110	31,2
No	243	68,8
Day hospital	**N**	**%**
Yes	200	56,7
No	153	43,3
State hospital	**N**	**%**
Yes	165	46,7
No	188	53,3
Private doctor	**N**	**%**
Yes	198	56,1
No	155	43,9
Private hospital	**N**	**%**
Yes	79	22,4
No	274	77,6

There are more respondents using the state day hospital services, 310 (87,8%) than private doctors 198 (56,1%). 165 (46,7%) respondents use the state hospital versus the private hospital, 79 (22,4%). Private medical care is expensive and not many of the respondents can afford to use these services. 73 (20,7%) of the respondents, as shown in this section, have medical aid funds that allow them to use a health service of their choice. A further analysis shows that respondents of all economic levels use all types of services. Respondents of all socio-economic levels use day hospitals. A statistical analysis shows that 30

(24,4%) respondents from the upper-middle socio-economic level N=123 are using the day hospital, 90 (67,7%) from lower socio-economic level (formal housing) N=133, and 80 (82,5%) from the informal housing sector N=97 are using day hospitals.

Variable 129: Do you find your health service accessible?

Table 5.95 shows that only 203 (57,5%) respondents find the health services accessible, while 150 (42,5) do not find the health services accessible. These include the private and public services. The association between accessibility and health services is significant (p=0,005). Among the residential areas Kraaifontein is the most accessible followed by Belhar and thirdly Bellville South. The least accessible is in Kuilsriver. The association between the socio-economic level and accessibility of health services are significant (p=0,017). The upper-middle level find it most accessible (67,5%) followed by the lower socio-economic (informal) level (54,6%) and thirdly, the lower socio-economic (formal) level.

Rosenberg and Hanlon in their study (1996) show that accessibility and utilization of health services need not only be seen in a framework that incorporates an individual's health and socio-economic status, but also in the health service environment in which the individual lives. This study shows that inaccessibility to health services not only affects the poor or those of lower socio-economic levels, but all levels. The following statistical illustration shows that 40 (32,5%) respondents from the upper-middle socio-economic level N=123, 66 (49,6%) of the lower socio-economic level (formal housing) N=133, and 44 (45,4%) informal housing N=97, find their health services inaccessible. Among those respondents who are employed, 103 (51,5%) find their health services inaccessible, and of the unemployed, 97 (48,5%) responded likewise. Accessibility is explained as "easily to approach, use or enter" (McLeod WT, 1982).

In the interviews conducted by the researcher, some of the reasons identified about inaccessibility are that the conditions in state institutions were appalling, unhygienic, quality of service was poor, and far from their residences. In one suburb, there is no day hospital, consequently, the respondents of this area are required to take a taxi and train to get to the nearest day hospital. According to the health policy, (Department of Health, 1995) one of the goals and objectives of

the primary health care policy is to promote accessibility of health services. According to the researcher, the results of 150 (42,5%) respondents not finding the services accessible are significant as inaccessibility of health services may lead to delayed health-seeking behaviour which could increase the morbidity and mortality of such persons (Stellenberg, 1995).

TABLE 5.95: DO YOU FIND YOUR HEALTH SERVICE ACCESSIBLE? (N=353)

	N	%
Yes	203	57,5
No	150	42,5
TOTAL	**353**	**100,0**

OPEN QUESTION: If "no" to question 82, specify why? N=150

The respondents gave a variety of reasons why they do not find the health services accessible as shown in table 5.96. It is disconcerting to note that a significant number of respondents 44 (29,3) have indicated that the attitudes of the doctors and nurses towards the patients/clients are negative. The respondents explained that they feel they were treated with such indignity because the services were free. Patients were made to feel that a favour was being done for them. 79 (52,7%) respondents complained of the waiting period of an average of 10 hours. Respondents are forced to be at the day hospital by 06h00 in the morning. If they arrive by 07h00, it may be too late. If there are too many patients on a particular day, rapid screening is done of all patients by the registered nurse, and subsequently, even if a respondent has been there at 06h00, he/she may be told to come the next day as the problem is not that "*serious*". This has financial implications for respondents such as losing a day's wages; they may not have money for transport to return the next day, conflict between employer and employee may result, and there is fear of losing their jobs. Consequently, this may lead to delayed health-seeking behaviour. Respondents 17 (11,3%) also reported that unhygienic conditions existed in all state health institutions. Unhygienic toilets further aggravate the long waiting hours at day hospitals. Human excreta are smeared on the walls of toilets and on the floors. Patients are forced to use these unhygienic facilities because of the long waiting period.

The primary health care policy indicates that the population should use the day hospitals as the first line of service, if not, they will be penalized if they bypass it by paying at the next level of service. However, table 5.96 also shows that 44 (29,3%) respondents reported that the availability of services was so poor, that at certain day hospitals an appointment system is practiced in order to alleviate overcrowding. The members of the public are turned away if they have no appointments. In one particular residential area respondents indicated that there was no day hospital. They were thus forced to use a taxi and a train to get to the recommended day hospital. Delayed health seeking behaviour, which could aggravate the health problems may set in. This is supported by one of the respondents presenting with a foot infection after being involved in a motor vehicle accident and being referred for follow-up care after proper treatment. He did not have the money to get to a day hospital. On investigation, the respondent explained that he was unemployed and that he could not get to a doctor or to the nearest day hospital because he just did not have the money. He had to be referred for urgent medical attention.

TABLE 5.96: IF "NO" TO QUESTION 82, SPECIFY WHY (N=150)

	N	%
Staff attitude negative towards patients / clients	44	29,3
Poor service includes: nursing, medical and pharmacy and emergency care	17	11,3
No service exists for those who are prepared to pay a small fee for services	7	4,7
Availability of services- no day hospital in one area, appointments essential to even attend a day hospital	44	29,3
Overcrowded due to staff shortage	26	17,3
Waiting period average 8-10 hours	79	52,7
Unhygienic conditions in health institutions include all levels of service: Dirty toilets with faeces smeared on the walls and urine on floors	17	11,3

The researcher points out that the possibility does exist that there are many cases in similar circumstances in which people delay seeking medical assistance because their health services are inaccessible. Delayed health seeking

behaviour takes its toll, not only on the health status of the individual, but it may also become a financial burden for the state.

Variable 130: Do you find your health service affordable?

Table 5.97 shows many of the respondents 184 (52,1%) find their health services affordable because they are not paying for any service, while those who were paying, 169 (47,9%) did not find their health services affordable. The association between affordability and health services is significant (p=0,002). Among the socio-economic levels, the respondents who found the health services the most affordable are from the lower socio-economic (informal) level (60,8%), followed by the upper-middle socio-economic level (58,5%) and thirdly the lower socio-economic (formal) level (39,9%).

Respondents who found their health services not affordable are: 51 (41,5%) are from the upper-middle socio-economic level N=123; 80 (60,2%) of the lower socio-economic level (formal housing) N=133, and 38 (39,2%) from the informal housing N=97.

TABLE 5.97: DO YOU FIND YOUR HEALTH SERVICE AFFORDABLE (N=353)

	N	%
Yes	184	52,1
No	169	47,9
TOTAL	**353**	**100,0**

OPEN QUESTION: If "no" to question 84, please specify.

Table 5.98 shows that all 169 respondents indicated that the services were too expensive. During the interviews respondents indicated that they are forced to use the day hospital because private doctors are too expensive. Respondents are forced into an intolerable situation for the reasons already mentioned, such as the attitude of staff and long waiting times so that many respondents try to avoid this by delaying to seek medical help.

TABLE 5.98: IF "NO" TO QUESTION 84, PLEASE SPECIFY (N=169)

	N	%
To expensive	169	100,0
TOTAL	**169**	**100,0**

Variable 131: Do you have a medical aid fund?

Table 5.99 shows that only 73 (20,7%) of all the respondents belong to a medical aid fund, while 280 (79,3%) have no medical aid fund. This explains the over-crowding at day hospitals as indicated and described in this section. Respondents who have a medical aid fund come from all socio-economic levels namely 20 (16,4%) upper-middle socio-economic level; 32 (23,88%) lower-socio-economic level, (formal housing) and 21 (21,7%) informal housing. The association between the affordability of medical services and belonging to a medical aid fund is statistically significant (p=0,001) as tested with the chi-square statistical test of significance. The association between the residential area and the respondents who have a medical aid is statistically significant (p=0,001). The majority of respondents are from Belhar (36,0%) followed by Kuilsriver (35,3%) and thirdly Bellville South (26,4%). Elsiesriver 6,3% and Kraaifontein (9,5%).

Among the various socio-economic levels the respondents who have a medical aid, are from the upper-middle socio-economic level (47,2%) from the lower socio-economic (formal) level (6,8%), followed by the lower socio-economic (informal) level (6,2%).

TABLE 5.99: DO YOU HAVE A MEDICAL AID FUND? (N=353)

	N	%
Yes	73	20,7
No	280	79,3
TOTAL	**353**	**100,0**

Variable 132: Are you using your health services?

The majority of the respondents 299 (84,7%) are using their health services as

required as shown in table 5.100. Among the various socio-economic levels the respondents who are using health services are from the upper-middle socio-economic level (93,5%) from the lower socio-economic (formal) level (90,2), followed by the lower socio-economic (informal) level (66,0%).

TABLE 5.100: ARE YOU USING YOUR HEALTH SERVICES? (N=353)

	N	%
Yes	299	84,7
No	54	15,3
TOTAL	**353**	**100,0**

The association between respondents using their health services and socio-economic level is statistically significant (p=0,001).

OPEN QUESTION: If "no" to question 87, please specify (N=54)

Table 5.101 shows the reasons why respondents are not using their health services. 28 (51,9%) respondents indicated that access problems, such as long queues of people, long waiting hours at day hospitals prevented them from using their health services. 15 (27,8%) indicated that they had no taxi and train fare to get to the day hospital while 11 (20,3%) indicated that they did not require such a service as yet.

TABLE 5.101: IF "NO" TO QUESTION 87, PLEASE SPECIFY (N=54)

	N	%
Access problems, long queues of people and long waiting hours at day hospitals, no day hospital in the area	28	51,9
Financial problems – have no money for taxi and train fare	15	27,8
Have not required any health service	11	20,3
TOTAL	**54**	**100,0**

OPEN QUESTION: Is there anything that you would like to share with me about health? (N=113)

The respondents were invited to share any views they had about health as shown in table 5.102. 113 (32,0%) respondents responded to this question, while 240 (68,0%) abstained. All views were condensed into common themes and then categorized as shown in table 5.103.The majority, 75 (66,4%) indicated that the health services were poor. A group of 17 (15,0%) respondents felt that health services should not be entirely free; the public should pay as free treatment contributes to poor services. Another group 5 (4,4%) indicated that health services are expensive and to ease this burden family packages should be introduced.

The respondents are concerned about the current quality of health services based on the primary health care policy being given to the public. Currently, it is not delivering the desired effect as envisaged. There are needs and problems as identified in the study that should be addressed. The success of any policy that is implemented, needs continuous evaluation to determine whether the outcome goals are being reached.

TABLE 5.102: IS THERE ANYTHING THAT YOU WOULD LIKE TO SHARE WITH ME ABOUT HEALTH? (N=113)

	N	%
Anti-social behaviour such as rape, assaults, crime affecting the public	16	14,2
Free treatment at day hospitals contributes to poor services – public should pay	17	15,0
Health services are expensive, family packages should be introduced	5	4,4
Poor health services, improvements are required	75	66,4
TOTAL	**113**	**100,0**

The introduction of a payment service to improve the health service is reiterated by (17) 15% of the respondents. The country is already burdened with existing

financial constraints and can least afford to give a free health service that is used by the majority of its citizens. Re-evaluation of this policy should also occur. Payment for services will not only benefit the country, but the patient as well. Cognisance should be taken of the valuable input patients contribute, as they are the consumers of such a service.

OPEN QUESTION: Is there anything that you would like to share with me about illness? N=89

The respondents were invited to share any views they had about illness. However, respondents failed to share anything about illness with the researcher but rather spoke about factors contributing to poor health. 89 (25,2%) respondents responded to this question, while 264 (74,8%) abstained. All views were condensed into categories as shown in table 5.103. The majority, 41 (46,1%) indicated that the areas are overpopulated with people suffering from tuberculosis (TB). As tuberculosis spread by droplet infection (Kozier *et al.*, 2000; Smeltzer and Bare 2000), respondents fear that they will contract the disease as TB patients disregarded the rest of the neighbourhood and would spit all over. Further reports received indicated that many TB patients defaulted in order to remain on a disability grant. Grants were used to buy alcohol that inactivated the anti-tuberculosis drugs. This type of behaviour on the part of TB patients indicates a serious lack of health education.

A group of 16 (18,0%) respondents reported that the walls of houses remained damp during the winter months and that this contributed to TB. The researcher read one of the reports obtained from a respondent that confirmed the degree of dampness measured in the floors and walls of his house. The researcher is able to substantiate this as she also inspected such walls in one of the residential areas where the research was conducted. Two respondents informed the authorities that the chances are good that they could have a re-occurrence of tuberculosis because of the wet walls. Unfortunately for these individuals tuberculosis did re-occur.

13 (14,6%) of the respondents complained about the environmental problems such as blocked drains, dirt dumps that were found in the residential areas. 9 (10,1%) respondents complained about the industrial wastes, such as fumes from chemical wastes that are affecting their health. Two respondents (2,2%)

indicated that unemployment is causing illness. As discussed in section (D), 30 (41,7%) N=72 respondents indicated that their stress levels are caused by unemployment. The problems indicated in table 5.104 impact negatively on the health status of individuals.

As discussed in the literature study (see paragraph 3.4), poor housing is also found in the Arctic regions where studies on the health status of the Eskimos in Alaska show high rates of tuberculosis, bronchiectasis, pneumonia and upper respiratory tract infections. This is not only due to the cold climate, but also because of badly ventilated dwellings with polluted air, the pollution being exaggerated by cigarette smoking (Vlok, 1991).

Low-income families live in houses that are badly designed and poorly constructed. Consequently, many of these individuals live in damp, noisy, overcrowded accommodation that is associated with physical and mental health problems and increased accident rates among adults and children. Studies have shown that there is a close statistical association between housing tenure and health. Research shows that owner-occupiers are likely to have the lowest death rates and council tenants the highest death rates (Blackburn, 1992).

Kogevinas's study (1990) in Blackburn (1992) identified an association between deaths from cancer and housing tenure. The study shows that male council house tenants were more likely to die from cancer of the face, oesophagus, stomach, larynx, bladder and lung. Women tenants were especially more likely to die from cancer of the cervix than owner-occupiers.

An individual's physical environment, which includes housing and sanitation facilities, may affect the health of an individual. Air, food and water pollutants are often directly or indirectly related to various types of cancer (Kozier *et al.,* 1995). The work environment is becoming more hazardous to the individual's health. This is attributed to modern industry that has become more complex and increasingly hazardous because of the greater number of toxic and carcinogenic substances used. Many diseases such as chronic obstructive airways disease and mesothelioma occur because of exposure to dust in mines (Vlok, 1991).

Kozier *et al.* (1995, 2000) points out that the environment of an individual of low socio-economic level or in poverty-stricken areas also has a bearing on overall health. Slum neighbourhoods are overcrowded and in a state of deterioration.

Infrastructure, that includes sanitation, water supply, roads and removal of waste is poor. Garbage may be strewn all over, and the area infested with rats. Social pathologies such as crime and sexual assault are constant threats.

In conclusion, the conditions under which the respondents live, are conducive to the development of a variety of diseases such as carcinoma, chronic bronchitis, tuberculosis to name but a few. Aggressive measures should be introduced to prevent the outbreak of disease by improving the quality of houses that are provided and to ensure a safe and hygienic environment.

According to the Department of Health (1995) the functions of a district health system are to ensure primary environmental care services, maintaining the area in an hygienic condition, the promotion of environmental health legislation that is sanitation, housing, smoke, noise, litter, food, hygiene and occupational hygiene and the control of local health hazards.

TABLE 5.103: IS THERE ANYTHING THAT YOU WOULD LIKE TO SHARE WITH ME ABOUT ILLNESS (N=89)

	N	%
Areas are overpopulated. People have tuberculosis (TB) "we *fear that we may also get it*", TB patients defaulted to remain on disability grant,	41	46,1
Attitude of staff undesirable at day hospitals	8	9,0
Environmental problems such as blocked drains, dirt dumps all over contributes to illnesses	13	14,6
Industrial wastes such as fumes from chemical wastes "*affects our chests*"	9	10,1
Poor housing is a major contributor to tuberculosis. Walls remain damp throughout the winter months	16	18,0
Unemployment causes illnesses	2	2,2
TOTAL	**89**	**100,0**

Variable 133: Presently, do you have any health problems at present?

Table 5.104 shows that 205 (58,1%) of the respondents indicated that they have

health problems, 75 (52,8%) of all males (N=142) and 130 (61,6%) of all females (N=211). The results show that respondents of all socio-economic levels have health problems. A further analysis show that 62 (50,8%) of the upper-middle socio-economic level (N=123) have health problems, 77 (57,5%) of the low socio-economic level, formal housing (N=133) and 66 (68,0%) from informal housing (N=97) have health problems. The majority of respondents with health problems had no post-schooling education. A further analysis shows that 118 (59%) of the unemployed (N=201) and 32 (61,5%) of respondents who have no income (N=52) have health problems.

The following results have been tested for statistical significance using the chi-square test, 95 % confidence interval:

- The association between the consumption of wine and health problems (p=0,05) is statistically significant.
- The association between the availability of money for meals; and health problems (p=0,05) is statistically significant.
- The association between exercise and health problems (p=0,04) is statistically significant.
- The association between the frequency of exercise and health problems (p=0,02) is statistically significant.
- The association between doing vigorous exercise at least three times per week and health problems (p=0,04) is statistically significant
- The association between socio-economic levels and health problems. (p=0,375) is not statistically significant.

TABLE 5.104: DO YOU HAVE ANY HEALTH PROBLEMS AT PRESENT? (N=353)

	N	%
Yes	205	58,1
No	148	41,9
TOTAL	**353**	**100,0**

Open question: If "Yes" to question 92, please specify your health problems?

Table 5.105 shows an analysis of the various systems affected. This table shows

that of all conditions the respiratory problems rank the highest, 71 (34,6%), followed by the cardiovascular system, 39 (19,0%) and thirdly the central nervous system that accounts for 32 (15,6%). This is followed by the musculo-skeletal, 26 (12,7%) and gastro-intestinal conditions, 24 (11,7) respectively. All other systems each account for less than 10% of the problems.

A high respiratory count could be attributed to the wet conditions and high pollen count occurring in the Western Cape during the winter and spring months respectively, problems that cannot be manipulated. However, the researcher observed appalling conditions under which many of the respondents lived. It was identified that the RDP (Redevelopment) houses built for those without dwellings, have wet walls and roofs throughout the winter aggravated by poor ventilation. Recently-built dwellings were found to have only one window. These conditions increase the risk for respiratory conditions such as pulmonary tuberculosis as discussed above.

Tables 5.106, 5.107, 5.108, 5.109, 5.110, 5.111, 5.112 and 5.113, show the analysis of the various problems pertaining to a system. Table 5.106 shows that headache 19 (59,4%) is the most common central nervous system problem. Hypertension accounts for 25 (64,1%) of all cardiovascular problems.

TABLE 5.105: IF "YES" TO QUESTION 92 SPECIFY YOUR HEALTH PROBLEMS: ACCORDING TO SYSTEMS (N=205)

SYSTEM	N	%
Respiratory	71	34,6
Cardio-Vascular	39	18,5
Central NervousSystem	32	15,6
Musculo-Skeletal	26	12,7
Psychiatric	15	7,3
Endocrine	14	6,8
Urinary	11	5,4
Integumentary	11	5,4
Auto-Immune	10	4,9
Reproductive and Breast	8	3,9
Ophthalmology	6	2,9
Haematology	5	2,4
Ear, Nose and Throat	5	2,4

TABLE 5.106: IF "YES" TO QUESTION 92, SPECIFY YOUR HEALTH PROBLEMS CONTINUED: CENTRAL NERVOUS SYSTEM (N=32); CARDIOVASCULAR SYSTEM (N=39)

Central Nervous System	N =32	%
Headaches	19	59,4
Epilepsy	6	18,8
Migraine	6	18,8
Tremors	1	3,1
Cardiovascular System	**N=39**	**%**
Hypertension	25	64,1
Heart problem	9	23,1
High cholesterol	2	5,1
Arterial insufficiency	2	5,2
Ulcer on the leg	1	2,6

Table 5.107 shows that asthma 25 (35,2) is the most common respiratory problem followed by sinusitis, 20 (28,2%). Gastric ulcers due to stress 11 (45,8%) are the most common gastro-intestinal problem.

TABLE 5.107: IF "YES" TO QUESTION 92 SPECIFY YOUR HEALTH PROBLEMS CONTINUED: RESPIRATORY SYSTEM (N=71

Respiratory System	N =71	%
Asthma	25	35,2
Sinusitis	20	28,2
Tuberculosis	6	8,5
Dyspnoea	4	5,6
Chest pain	4	5,6
Coughing	4	5,6
Chronic bronchitis	3	4,2
Bronchitis	2	2,8
Upper Respiratory tract infection	2	2,8
Bronchietasis	1	1,4

TABLE 5.108: IF "YES" TO QUESTION 92, SPECIFY YOUR HEALTH PROBLEMS CONTINUED: GASTRO-INTESTINAL SYSTEM (N=24)

Gastro-Intestinal System	N=24	%
Stomach ulcers due to alcohol abuse	11	45.8
Bleeding gums	2	8.3
Spastic colon	2	8.3
Tooth-ache	2	8.3
Mass loss	1	4,2
Indigestion	1	4.2
Abdominal surgery	1	4.2
Carbuncle	1	4.2
Abdominal hernia	1	4.2
Stress	1	4.2
Poor appetite	1	4.2

TABLE 5.109: IF "YES" TO QUESTION 92, SPECIFY YOUR HEALTH PROBLEMS CONTINUED: REPRODUCTIVE SYSTEM AND BREASTS (N=8); INTEGUMENTARY SYSTEM (N=11)

Reproductive System and Breasts	N= 8	%
Menometrorrhagia	2	25
Amenorrhoea	1	12,5
Cancer of breast	1	12,5
Dysmenorrhoea	1	12,5
Endometriosis	1	12,5
Hysterectomy	1	12,5
Vaginal Infection	1	12,5
Integumentary System	**N=11**	**%**
Scabies	7	63,6
Calluses	1	9
Contact Dermatitis	1	9
Porphyria	1	9
Urticaria	1	9

Table 5.110 shows that backache 14 (53,8%) is the most common musculo-skeletal problem.

TABLE 5.110: IF "YES" TO QUESTION 92, SPECIFY YOUR HEALTH PROBLEMS CONTINUED: HAEMATOLOGY SYSTEM (N=5); MUSCULO-SKELETAL SYSTEM (N=11)

Haematology	N=5	%
Anaemia	5	100
Musculo-Skeletal	**N =26**	**%**
Backache	14	53,8
Ankle injury	1	3,8
Finger injury	1	3,8
Fractured left arm	1	3,8
Infection of right foot with internal plate	1	3,8
Knee injury	4	15,4
Pain of neck	1	3,8
Pain in shoulder	1	3,8
Pain in diaphragm	1	3,8
Hip Replacement	1	3,8

TABLE 5.111: IF "YES" TO QUESTION 92, SPECIFY YOUR HEALTH PROBLEMS CONTINUED: ENDOCRINE SYSTEM (N=14); AUTO-IMMUNE SYSTEM (N=10)

Endocrine System	N=14	%
Diabetes Mellitus	12	85,7
Goitre	2	14,3
Auto-immune	**N=10**	**%**
Arthritis	9	90
Gout	1	10

TABLE 5.112: IF "YES" TO QUESTION 92, SPECIFY YOUR HEALTH PROBLEMS CONTINUED: URINARY SYSTEM (N=11); PSYCHIATRIC SYSTEM (N=10)

Urinary System	**N=11**	**%**
Kidney and bladder problems	7	63,6
Urinary tract infection	3	27,3
Kidney transplant	1	9,1
Psychiatric Conditions	**N=15**	**%**
Anxiety due to stress	9	60
Schizophrenia	4	26,7
Depression	2	13,3

TABLE 5.113: IF "YES" TO QUESTION 92, SPECIFY YOUR HEALTH PROBLEMS (CONTINUED): EAR NOSE AND THROAT (N=5); OPTHALMOLOGY (N=10)

Ear, Nose and Throat	**N=5**	**%**
Otitis media	3	60
Tonsillitis	2	40
Eyes	**N=6**	**%**
Visionary	6	100

In conclusion the current health problems were identified among the respondents of which respiratory problems 71 34,6%) are the highest with asthma the most common respiratory problem, 25 (35,2%); followed by sinusitis, 20 (28,2%). Cardiovascular system 39 (18,5%) rates the second highest, with hypertension 25 (64,1%) as the most common cardiovascular problem. The respiratory problems could be attributed to the problems identified in the study as discussed in paragraphs 5.9, section G and 5.10, section H.

Variable 134: On a scale of 1 to 10, how would you rate your health?

The mean rating as shown in table 5.114 is 6.95 and standard deviation 1.78. The majority of the respondents responded to the ratings of 6, 7 and 8. Table 5.116 shows an analysis of the reasons given for the various ratings. 6 (9%)

respondents out of 67 who rated themselves between 3-5, and 9 (4,1%) out of 217 (who rated themselves between 6 and 8) explained to the researcher that they were aware that indulging in destructive behaviour gives one a lower rating as an individual's health can either improve by discontinuing such behaviours or deteriorate if such behaviour continues.

Table 5.115 shows an analysis of the respondents who have indicated that they feel good despite their problems. It is interesting to note that 20 (25,0%) of these respondents have indicated a rating between 9-10. According to Travis and Ryan, (1988) wellness is a choice, a way of life. Wellness is not necessarily the strong, the brave, the successful, the young, the whole, or even the illness free individual. A person can be physically handicapped, aged, imperfect, or in pain and may still be living in a process of wellness.

Figure 2.2 wellness continuum illustrates two arrows pointing in opposite directions, which are joined in the centre, the neutral point (5). Movement to the right of the neutral point indicates increasing levels of health and well-being of the individual. This is achieved through (1) awareness, (2) education (3) growth. However, movement to the left of the neutral point indicates a progressively decreasing state of health and premature death. A respondent who is physically ill can still be orientated towards wellness or physically healthy and still be functioning from an illness mentality. What is of importance is not the point on the continuum the respondent might identify as the current state, but the direction on the pathway in which the person is facing towards "*high-level wellness*" or towards "*premature death*".

Consider the following illustration about a person who is in physical good health, but is always complaining or worrying, or smoking or drinking alcohol. He/she might be standing on the right side of the continuum, but facing towards the left that is towards "*premature death*". Similarly, another person who is in pain or who is handicapped physically or mentally, can still have a genuinely positive, optimistic outlook, be cultivating love instead of fear, and consequently would be facing towards the right in the direction of "*high level wellness*".

Applying the model in this study the researcher uses the following high-risk behavioural indicators to determine the health status of the sample N=353.

The wellness module was used to evaluate the health status of the respondents.

The following six high risk factors were used to compare with the level of wellness as indicated by the respondents themselves:

(i) consumption of alcohol;
(ii) smoking
(iii) exercise
(iv) vigorous exercise
(v) health problems and
(vi) height and mass

It was identified that respondents who rated themselves as low on the wellness continuum were actually living the healthiest, with reference to these factors that is these respondents never smoke, consume alcohol, they exercise and do vigorous exercise three times per week, they have a normal mass and have no health problems. Respondents who rated themselves between 7 and 10 on the wellness continuum scored negative on 3 to 4 of the six factors while those who rated themselves between two and 6 scored negative on four to 5 of the six high risk factors. Only 11 (3,1%) respondents scored positively on the six high risk factors and are thus facing towards a high level of wellness. Therefore the majority of the respondents are facing towards premature death on the wellness continuum.

TABLE 5.114: ON A SCALE OF 1 TO 10, HOW WOULD YOU RATE YOUR HEALTH? N=353

Rating	N	%
1	6	1.7
2	1	0.3
3	1	0.3
4	11	3.1
5	55	15.6
6	62	17.6
7	76	21.6
8	79	22.4
9	31	8.8
10	31	8.8
Mean Rating = 6,95:	**SD. =1,78**	

TABLE 5.115: MOTIVATE WHY YOU HAVE GIVEN YOURSELF THIS RATING

N=353

RATING	TOTAL: N=353							
	Rating 1-2		Rating 3-5		Rating 6-8		Rating 9-10	
	N	%	N	%	N	%	N	%
No Health Problems: Feeling good – never sick	0	0,0	8	2,3	93	26,3	40	11,3
Destructive Behaviour: Unfit, obese, smoking, drinking alcohol	0	0,0	6	1,7	9	4,0	0	0,0
Health problems Present	7	2,0	53	15,0	115	32,6	22	6,2
TOTAL: N=353	**7**	**2,0**	**67**	**19,0**	**217**	**62,9**	**62**	**17,5**

TABLE 5.116: AN ANALYSIS OF RESPONDENTS WHO INDICATED THAT DESPITE PROBLEMS THEY FEEL GOOD.

Despite problems I feel good	N=80					
	Rating 3-5		Rating 6-8		Rating 9-10	
	N	%	N	%	N	%
	5	6,3	55	68,7	20	25,0

In conclusion the association between the reasons respondents gave for their rating and the actual rating of their health (p=0,001).

OPEN QUESTION: Over the past five years what would you say was your most common problem that forced you to see a doctor?

45 (12,7%) respondents indicated that they have never had any health problems that warranted consulting a doctor. An analysis was made of all the health problems, one (0,3%) respondent indicated that he had only been to doctor for a medical check-up. 307 (87%) respondents indicated that they had had problems that forced them to see a doctor over the past five years. Table 5.118 shows the systems affected. Respiratory problems rank the highest 7 (34,6%) this is due to a large number of respondents, 57 (41,3%) who had influenza. The table shows that the current problems of most of the systems have increased. This could be

attributed to an increase in the age of the respondents, the financial circumstances and environmental problems as discussed in paragraphs 5.9, and paragraph 5.10

TABLE 5.117: OVER THE PAST FIVE YEARS WHAT WOULD YOU SAY WAS YOUR MOST COMMON PROBLEM THAT FORCED YOU TO SEE A DOCTOR VERSUS THE PRESENT PROBLEMS

Past 5 years N=305	**N**	**%**
Respiratory	138	66,7
Musculo-Skeletal	46	15
Cardiovascular	35	11,4
Gastro-Intestinal	25	8,1
Reproductive and Breast	24	7,8
Central Nervous System	23	7,5
Urinary	20	6,5
Ear, Nose and Throat	16	5,2
Psychiatric	15	4,9
Integumentary	11	3,6
Endocrine	9	2,9
Ophthalmology	6	2,0
Auto-Immune	5	1,6
Haematology	5	1,6
Present N=307	**n**	**%**
Respiratory	71	34,6
Cardiovascular	38	18,5
Central Nervous System	32	15,6
Musculo-Skeletal	26	12,7
Gastro-Intestinal	24	11,7
Psychiatric	15	7,3
Endocrine	14	6,8
Integumentary	11	5,4
Urinary	11	5,4
Auto-Immune	10	4,9
Reproductive and Breast	8	3,9
Ophthalmology	6	2,9
Ear, Nose and Throat	5	2,4
Haematology	5	2,4

5.10 SECTION I: HEALTH ASSESSMENT

In this section subjective and objective data obtained about the current health of respondents are discussed. Self-reported clinical manifestations as interpreted by the respondents were verified with a physical examination. The physical assessment as designed, meets the requirements in nursing. The assessment included the more common problems of the systems of the body that are stress related. Current problems being experienced by respondents were investigated. The duration of each problem identified was also requested, but many respondents were not able to give reliable answers. Many indicated that they were not so sure of the duration; others indicated approximated times, while there were many that simply said that they could not remember. Consequently, the researcher decided to discard all results obtained regarding duration in order to protect the reliability of the study. The common signs and symptoms of the following systems were addressed:

1. General Health
2. Integumentary System
3. Neurological System
4. Mouth and Throat
5. Breasts (Females only)
6. Respiratory System
7. Cardiovascular System
8. Gastro-intestinal Tract
9. Urinary Tract
10. Reproductive System: Females
11. Reproductive System: Males
12. Joints
13. Endocrine System
14. Sleeping Disorders

Variables 135, 136, 137, 138, and 139,140,141: General Health

Table 5.118 shows the general problems respondents are complaining about. The table shows that 95 (26.9%) of the respondents are experiencing feelings of fatigue, a problem that could result from various reasons.

TABLE 5.118: GENERAL HEALTH (N=353)

	N	%
(a) Weight loss	49	13,9
(b) Weakness	52	14,7
(c) Feelings of fatigue	95	26,9
(d) Mood changes	65	18,4
(e) Night sweats	57	16.1
(f) Bleeding tendencies	6	1,7
(g) Other: Backache (1), Hot flushes (1)	2	0,2

Variables 142, 143, 144, 145: The Integumentary System

Table 5.119 shows that eczema is the most common skin problem. Table 5.120 shows an analysis of those that responded to other.

TABLE 5.119: THE INTEGUMENTARY SYSTEM (N=353)

	N	%
(a) Eczema	39	11,0
(b) Psoriasis	6	1,7
(c) Changes in moles (for example size, colour)	7	2,0
(d) Other	25	7,1

TABLE 5.120: THE INTEGUMENTARY SYSTEM: OTHER (N=25)

	N	%
Acne	5	20,0
Dandruff	1	4,0
Hirsutism	1	4,0
Porphyria	1	4,0
Scabies	6	24,0
Skin Allergy	1	4,0
Vitiligo	10	40,0
TOTAL	**25**	**100,0**

Variables 146, 147,148,149,and 150: Neurological System

Table 5.121 shows that 169 (47,9%) of the respondents are suffering from headaches, followed by dizziness, 90 (25,5). Many of the respondents indicated that their headaches are because of stress. More females 126 (59,7%) than males 45(31,7%) had headaches, this could be stress related.

TABLE 5.121: NEUROLOGICAL SYSTEM (N=277)

	N	%
(a) Headaches	169	47,9
(b) Dizziness	90	25,5
(c) Fainting	6	1,7
(d) Convulsions	8	2,3
Other:Epilepsy (2) Head "*zinging*" at night (1); Syncope (1)	4	1,1
TOTAL	**277**	**101**

In conclusion, the headache is the most common problem that was identified and is often associated with stress and hypertension. However, in this study the association between headaches and the diastolic blood pressure (p=0,78) or the systolic blood pressure (p=0,16) is not statistically significant. The association between headaches and stress (p=0,25) is not statistically significant.

Variables 151, 152, 153, 154, 155, 156, and 222: Mouth and Throat

Table 5.122 shows the oral and pharyngeal problems identified. In table 5.124, the last dental appointment is shown. The analysis of the data shows that oral hygiene is not a priority for many respondents. The number of respondents, 199 (56,4%) who never visit the dentist, substantiates this statement, also the cavities identified in the mouths of 92 (26,1%) respondents.

The socio-economic status is associated with visits to the dentist. It was identified that the majority of the respondents who never visited a dentist, 83 (62,4%) were from the low socio-economic level living in formal housing (N=133), and 58 (59,8%) living in informal housing (N=97). A further analysis shows that income

per month may also be a factor that prevents the respondents from visiting a dentist. Respondents who earn less than R1500 per month (N=173), 114 (65,9%) never visit the dentist compared to those who earn between R1501 and R3000 (N=78), 42 (53,9%) and those who earn between R3001 and R4500 (N=20), 6(30%) never visit the dentist. The majority of respondents with toothache and cavities were of a low socio-economic level. Respondents with toothache 24 (18,1%) were of a low socio-economic level; living in formal housing (N=133), and 19 (19,6%) living in informal housing (N=97). Respondents with cavities 24(18,1%) were of a low socio-economic level living in formal housing (N=133) and 23 (23,7%) living in informal housing (97).

TABLE 5.122: MOUTH AND THROAT (N=353)

	N	%
(a) Bleeding gums	54	15,3
(b) Toothache	54	15,3
(c) Cavities	92	26,1
(d) Difficulty swallowing	10	2,8
(e) Voice changes or hoarseness	13	3,7
Other Gum abscess (2) Infection of the mouth (1); Tonsillitis (1)	7	2,0

TABLE 5.123: MOUTH AND THROAT: LAST DENTAL APPOINTMENT

	N	%
<6 months ago	56	15,9
>6 and <12 months ago	31	8,8
>12 and <24 months ago	19	5,4
>24 months ago	48	13,6
Never visit a dentist	199	56,4
TOTAL	**353**	**100,0**

In conclusion, poor mouth hygiene causes local infections such as gingivitis, stomatitis, pyorrhoea, parotitis and glossitis localized in the mouth, but can cause systemic infections influencing the health status of the individual. It also becomes a problem post-operatively if not treated before surgery. (Smeltzer and Bare,

2000).

Variables 157, 158, 159, 160, 161, and 162: Breasts (Only Female)

Table 5.124 shows the problems identified with the assessment of the breasts of the female respondents.

TABLE 5.124: BREASTS (ONLY FEMALE: N=211)

	N	%
(a) Nipple discharge	7	3,3
(b) Scaling around nipple	4	1,9
(c) Cracks around nipple	2	0,9
(d) Dimples	0	0,0
(e) Lumps	5	2,4
(f) Other: Painful breasts (3) Retracted nipple (1)	4	1,9

Variable 223: (g) How often do you examine your breasts?

Table 5.125 shows that 66 (31,3%), respondents examine their breasts daily, while 70 (33,2%) never examine their breasts, 30 (14,2%) of the respondents only examine their breasts sometimes. The researcher was astonished when one respondent indicated that one must "*... never touch one's own body*".

TABLE 5.125: (g) HOW OFTEN DO YOU EXAMINE YOUR BREASTS? (N=211)

	N	%
Daily	66	31,3
Once a week	20	9,5
Once a month	22	10,4
Some times	30	14,2
It depends	3	1,4
Never	70	33,2

The socio-economic level and the educational level are not factors that determine whether a female will examine her breasts or not. It has been identified that the association between examining the breasts and the age of menarche (p=0,001) is statistically significant. The researcher concludes that the value of understanding why the breasts are examined, and the health education about examining their breasts are lacking.

Variable 224: (h) How often do you have a mammogram?

Table 5.126 shows that the respondents are ignorant about mammograms. The table shows that only 6 (2,8%) have a mammogram yearly followed by 1 (0,5%) every second year; 204 (96,7%) have never had a mammogram. Statistics obtained about the six respondents who have an annual mammogram 4 (3,3%) are upper-middle economic level (N=123), and 2 (1,5%) from low economic level (formal housing) (N=133). 5 (83.3%)of the respondents have no post-schooling education and 1 (16,7%) a college diploma (N=6). A mammogram is a breast-imaging technique that can detect nonpalpable lesions and it assists in diagnosing palpable lesions. The American Cancer Association recommends a mammogram every year starting at the age of 40 years. A baseline mammogram should be obtained after the age of 35 years and by the age of 40 years. Current statistics show that a woman's lifetime risk to develop cancer of the breast is 1:8. However, the risk varies according to age for developing breast cancer by the age of 35 years it is 1:622; by the age of 60 years it is 1:24 (Smeltzer and Bare, 2000).

TABLE 5.126: (h) HOW OFTEN DO YOU HAVE A MAMMOGRAM? (N=211)

	N	%
Yearly	6	2,8
Every second year	1	0,5
Never	204	96.7
Other	3	1,4

In conclusion it is alarming that (33,2%) of the females are not examining their breasts especially as the earlier cancer is diagnosed, the better the prognosis.

Examining the breasts is a basic technique and every female should be skilled in performing the technique. A mammogram is a sophisticated and costly examination, as already discussed in paragraph 5.9 the majority of the respondents do not belong to a medical aid fund and can least afford it. The state does not carry out this test as a routine measure in the prevention and early detection of cancer.

According to Smeltzer and Bare (2000) there is no cure for breast cancer. Between 1990 and 1994 the mortality decreased by 5,6% suggesting that the combination of early detection and better treatment options is producing an effect on overall survival. According to the American Cancer Society, 175000 breast cancers are diagnosed annually with an estimated 43300 deaths.

Variables 163, 164, 165, 166, 167, 168, and 169: Respiratory system

Table 5.127 shows an analysis of the respiratory problems that were identified by means of the physical assessment of the respondents. Shortness of breath, 80 (22,7%) followed by coughing, 69 (19.5%) are the most common problems. Cognisance should be taken that 71 (34.6%) of all the respondents suffer from a respiratory disease as shown in table 5.106. Respiratory diseases present and active were identified in 31 (8,8%) respondents. The majority of the respondents are from Bellville South 7 (13,2%) followed by Kraaifontein 6 (19,4%). It was identified that the respondents of Bellville South were living very close to factories polluting the air with chemical fumes to which the respondents are exposed daily. Kraaifontein has two large informal settlements where there is no control over the burning of fires for domestic use and even burning of tyres (Air Pollution Control, Cape Metropolitan Council, 1999). These problems are major contributory factors to the development of a respiratory disease. More males 26 (18,3%) complained of chest pain than females 30 (14,22%), the age groups most affected were between 31-40 years, 24 (17,9) and 41-50, 18 (18,6%). Chest pain can be associated with a respiratory or cardiac problem. The description of the pain was that of an underlying respiratory disease.

The association between chest pain and high blood pressure (p=0,44). is not statistically significant.

TABLE 5.127: RESPIRATORY SYSTEM (N=353)

	N	%
(a) Chest pain	56	15,9
(b) Cough	69	19,5
(c) Shortness of breath	80	22,7
(d) Wheezing	39	11,0
(e) Coughing up blood	4	1,1
(f) Lung disease present	31	8,8
(g) Other: Bronchospasm(1)	1	0,3

According to the data obtained, respiratory problems rank the highest in this sample of Coloured people. These problems are not only because of the wet conditions experienced during the winter months, a factor beyond the control of the individual, but as described in paragraphs 5:9, and 5.10 there are numerous contributory factors influencing the respiratory system.

Variables 170, 171, 172, 173, 174, 175, 176, 177, and 178:Cardiovascular System

Table 5.128 shows an analysis of the cardiovascular problems that were identified. 40 (11,3%) of the respondents indicated that they were hypertensive. The objective data obtained from test measurements shows that 95 (26,9%) had an increased systolic measurement and 113 (32,0%) show an increased diastolic measurement. No significant difference among the socio-economic levels was obtained, but fewer males 13 (9,2%) than females 27 (12,8%) were identified. This could be attributed to the fact that more females are overweight, 143 (67,8%) of all females (N=211) are overweight, a causal factor of hypertension. Hypertension was predominantly identified within the ages 31-40, 13 (9,7%) and 41-50, 24 (24,7%). Only 3 (2,5%) between the ages 21-30 years. The association between high blood pressure and headaches P=0,44 is not statistically significant.

Heart problems that were identified 9(2,5%) as listed are:

- Stab in the heart (2)
- Stabbing pain under heart (2)
- Angina (3)
- Heart attacks (2)

TABLE 5.128: CARDIOVASCULAR SYSTEM

	N	%
(a) Heart disease present	9	2,5
(b) Palpitations	44	12,5
(c) Heart murmurs	6	1,7
(d) High blood pressure	40	11,3
(e) Anaemia	9	2,5
(f) Varicose veins	30	8,5
(g) Leg swelling	13	3,7
(h) Ulcers	1	0,3
(i) Other: Suffocating feeling	2	0,6

Table 5.129 show an internationally accepted classification of blood pressure as reported by the Sixth Joint National Committee on Prevention, Detection, Evaluation and Treatment of high Blood Pressure (1997). This classification was used to determine whether respondents had a normal or abnormal reading.

A diastolic ≥ 90mmHg reading confirmed with two consecutive measurements for any individual are regarded hypertensive. The diastole is the more crucial reading as this occurs when the ventricles are resting.

TABLE 5.129: CLASSIFICATION OF BLOOD PRESSURE FOR ADULTS AGE 18 AND OLDER (REPORT OF THE SIXTH JOINT NATIONAL COMMITTEE ON PREVENTION, DETECTION, EVALUATION AND TREATMENT OF HIGH BLOOD PRESSURE, 1997)

Category	Systolic (mmHg)		Diastolic (mmHg)
Optimal	<120	and	<80
Normal	<130	and	<85
High-Normal	130-139	or	85-89
Hypertension			
Stage 1	140-159	or	90-99
Stage 2	160-179	or	100-109
Stage 3	≥180	or	≥110

Structural and functional changes in the heart and blood vessels contribute to increases in blood pressure that occur with age. Isolated systolic hypertension is more common in the aged (Kozier *et al.,* 1991, 1995, 2000; Smeltzer and Bare, 2000)

In conclusion, the objective data obtained from test measurements shows that 95 (26,9%) had an increased systolic measurement and 113 (32,0%) show an increased diastolic measurement. The results obtained are similar to those obtained in a research project conducted in Paternoster on the West Coast by the researcher (Stellenberg,1997). The health status of the people was determined through screening for high-risk behaviours and underlying diseases not known to the individual. Ninety-eight adults of whom 40% were hypertensive were referred. The high-risk behaviours, such as alcohol use, smoking, lack of exercise and obesity contribute to the hypertension rate.

Variables 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, and 190: Gastro-intestinal Tract

Table 5.130 shows the gastro-intestinal problems identified on assessment. 87 (24,6%) respondents suffered from heartburn, of which 29 (20,4%) are males and 58 (27,5%) females. 56 (15.9%) of all respondents suffer from constipation of which 13(9,2%) are males and 43 (20,4%) females.

TABLE 5.130: GASTRO-INTESTINAL TRACT (N=353)

	N	%
(a) Nausea	27	7,6
(b) Vomiting	24	6,8
(c) Loss of appetite	12	3,4
(d) Indigestion	15	4,2
(e) Heartburn	87	24,6
(f) Bright red blood in stools	3	0,8
(g) Tarry black stools	1	0,3
(h) Diarrhoea	4	1,1
(i) Constipation	56	15,9
(j) Abdominal pain	21	5,9
(k) Rectal pain	3	0,8
Other: breaks a lot of winds after surgery on the colon (1); haemorrhoids (2); spastic colon (1); lumps in the abdomen (1)	5	1,4

In conclusion, the researcher identified that these problems could be prevented, however, ignorance about a healthy balanced diet with plenty of fluids, roughage in the diet and regular exercise to prevent constipation exists among respondents. Dietary ignorance about certain foodstuffs causing heartburn also exists among respondents. The majority of the respondents of the sample are of low socio-economic and low educational levels. They lack the understanding about dietary precaution measures that can be applied to prevent the problems as identified. Health education is therefore recommended.

Variables 191, 192, 193, 194, 195, 196, 197, 198, 199, and 200: Urinary Tract

Table 5.131 shows the urinary problems identified on assessment. 44 (12,5%) of the respondents complained of nocturia, identified as the most common problem.

TABLE 5.131: URINARY TRACT (N=353)

	N	%
(a) Frequency	30	8,5
(b) Dribbling	11	3,1
(c) Urgency	17	4,8
(d) Urination at night	44	12,5
(e) Difficulty starting a stream	9	2,5
(f) Blood in the urine	5	1,4
(g) Incontinence	6	2,0
(h) Pain or burning upon urination	23	6,5
(i) Sexually transmitted disease present	3	0,8
Other: Poor urine stream due to enlarged prostrate gland (1) Urinary tract infection (6)	7	2,0

A habit of drinking fluids before going to sleep was identified as the cause for the nocturia as patients informed the researcher that they have plenty of fluids before going to bed, some respondents indicated that they have a mug of coffee in bed . 30 (8,5%) of the respondents complained of frequency, the second most common problem identified, of which 7 (4,9%) males and 23 (10,9%) females complained, was frequency. Pain and burning upon urination was a problem in 6

(4,2%) males and 17 (8,1%) females, this could be indication for a possible urinary tract infection. Urinary tract infection was a possible diagnosis in the patients who complained of these symptoms and presented with leucocytes in the urine. These respondents were referred to a doctor for further investigations.

In conclusion, urinary tract infection is a possible problem that was identified and could be attributed to the lack of health education as described in paragraph 5:11. Blood in the urine can be a serious problem that could be caused by trauma to the kidney, tumor of the kidney, renal stones. These patients, in whom the haematuria was confirmed with a urine test, were referred to a doctor for further investigations.

REPRODUCTIVE SYSTEM (FEMALES)

1.1 MENSTRUAL CYCLE

Variable 225: (a) Age of Menarche

The majority of the respondents had their first menarche between the ages of 11 and 14 years, 92 (43,6%). Table 5.132 shows an analysis of the onset of menarche. According to Smeltzer and Bare (2000) the risk of developing breast cancer is higher in females who started menstruating at 12 years and younger. The purpose of the following associations is to emphasise the importance of prevention and early detection of cancer of the breast. Any abnormality is always significant and needs medical attention.

- The association between nipple discharge and the age of menarche (p=0,001) is statistically significant.
- The association between scaling around the nipple and the age of menarche (p=0,001) is statistically significant
- The association cracks around the nipple and the age of menarche (p=0,001) is statistically significant
- The dimples and the age of menarche (p=0,001) is statistically significant

TABLE 5.132: AGE OF MENARCHE (N=211)

	N	%
<11 years	8	3,8
≥11 years <14 years	92	43,6
≥14 years <16 years	73	34,6
≥16 years	38	18,0
TOTAL	**211**	**100,0**

Variable 226: (b) Last menstrual period

Data obtained in this question was irrelevant and thus discarded.

Variables 201, 202, 203, 204, and 205: Any other problems

Table 5.133 shows an analysis of the problems of the reproductive system. A significant number of respondents, 22 (10,4%) have a vaginal discharge, followed by a vaginal itch, 19 (9,0%), especially predominant between the ages 31 to 40 years.

TABLE 5.133: ANY OTHER PROBLEMS (N353)

	N	%
(a) Bleeding between periods	15	7,1
(b) Pain during intercourse	15	7,1
(c) Vaginal discharge	22	10,4
(d) Vaginal itching	19	9,0
Other:Pelvic pain (1), Pelvic infection due to multiple rape (1), Very dry vagina (2)	4	1,9

These clinical manifestations may be indications of an underlying vaginal infection. However, a variety of reasons that cause vaginal infections such as poor personal hygiene, premenarche, synthetic clothing, intercourse with an infected partner exist. Vaginal itch is also associated with diabetes mellitus in females. Bleeding between menstrual periods, 15 (7,1%) and pain during intercourse, 15 (7.1 %) are also significant data. The age distribution for bleeding

between periods is: 21 to 30 years: 6 (4,9%), 31 to 40years: 7 (5,2%) and between 41-50 years 2 (2,1%). Pain with intercourse: 21 to 30 years: 7 (5,7%); 31 to 40 years 5 (3,7%) and 41 to 50 years: 3 (3,1%). Pain during intercourse could be associated with increased stress levels and vaginal infections.

In conclusion, the majority of the respondents live under appalling, unhygienic conditions. Water and sanitation services are poor, promiscuous behaviour is rife and a lack of health education exists. The researcher made these observations during her field-work. To illustrate this a low socio-economic house had one toilet and tap that was shared with eight (8) families living in informal houses "shacks" in the backyard. Some of the shacks in the informal settlements had no toilet or water. The bucket system is practised and the fecal and urine content is buried daily. According to a national survey (Department of Health, 1998) the prevalence of condom use during the last sexual intercourse among Coloured women were 19,5% of which 5,6% indicated with any partner. These problems may possibly cause vaginal infections.

Variables 206, 207, 208, 209, and 210: Reproduction System – Males

Table 5.134 shows an analysis of the problems of the male reproductive system. 2 (1,4%) respondents have complained of signs and symptoms of a sexually transmitted disease.

TABLE 5.134: REPRODUCTION SYSTEM – MALES: (N= 142)

	N	%
(a) Penile discharge	1	0,7
(b) Sexual dysfunction or difficulty	2	1,4
(c) Penile swelling	0	0,0
(d) Masses or lesions	2	1,4
Other: fungal infection (1); impotence (1); painful intercourse (1), warts on the penis (1)	4	2,8

In a national survey of sexually transmitted diseases in men (Department of Health, 1998) 4.8% of Coloured men reported painful urination or discharge and

1,3% with genital sores.

Variables 211, 212 and 213: Joints

The problems that were identified were all associated with arthritis. Data is shown in tables 5.134. It was identified that predominantly females were affected with joint problems. Eight (5,6%) males and 16 (7,6%) females experiencing swelling. The 12 (12,4%) respondents affected were between the ages 41 to 50, followed by 9 (6,7%) between 31 to 40 years. Eight (5,6%) males and 21 (10,0%) females complain of joint stiffness. Similar results were obtained for joint stiffness. 15 (15,5%) respondents of the age group 41 to 50 years are most affected, followed by 12(9,0%) between 31 to 40 years.

TABLE 5.135: JOINTS (N=353)

	N	%
(a) Joint swelling	24	6,8
(b) Joint stiffness	29	8,2
(c) Other: Cramps in joints (1), Painful joints (13)	14	4,0

Variables 214, 215, 216, 217, and 218: Endocrine System

Table 5.136 shows the endocrine problems that were identified. Thirteen (3,7%), 3 (2,11%) males and 10 (4,7%) females indicated that they had diabetes mellitus. This was confirmed with a blood glucose test and the urine test for glucose. The respondents concerned had non-fasting blood glucose levels of more than 10mmol/l. One respondent's blood glucose level was 19mmol/l. The presence of glucose in the urine supported the diagnosis.

The age range most affected is between 41 to 50 years, 8 (8,3%). Excessive thirst and eating are possible clinical signs of diabetes mellitus. However, this was not supported by the objective tests that were carried out. Excessive eating and drinking were predominant among the females. Goitre problems were only identified in females.

TABLE 5.136: ENDOCRINE SYSTEM (N=353)

	N	%
(a) History of goitre	5	1,4
(b) Diabetes	13	3,7
(c) Excessive thirst	29	8,2
(d) Excessive eating	20	5,7

In conclusion, diabetes mellitus is the most prevalent endocrine disorder followed by goitre. Some grades of goitre are accompanied by hyperthyroidism in which case they are described as toxic, others are associated with euthyroid state and are referred to as non-toxic goitres (Smeltzer and Bare, 2000). Ten (2,8%) new diabetic cases were diagnosed as discussed in paragraph 5:11.
Patients were referred to a doctor for further investigation.

Variables 219, 220, and 221: Sleeping Disorders

Table 5.137 shows an analysis of sleeping disorders. The most common sleeping disorder is insomnia, 51 (14,4%). Respondents indicated that the insomnia was because of stress. More females, 37 (17,9%) were experiencing insomnia than males, 14 (9,9%). The age group most affected is between 31-40 years, 22 (16,4%).

TABLE 5.137: SLEEPING DISORDERS (N=353)

	N	%
(a) Insomnia	51	14,4
(b) Hypersomnia	1	0,3
(c) Other: Wet dreams	1	0,3

5.11 SECTION J: OBJECTIVE TEST MEASUREMENTS

This section was specifically designed for the measurement of objective data. Data obtained included the following: blood pressure, pulse and respiration rate, haemoglobin, blood glucose, urinalysis for specifically blood, protein, and

glucose, cholesterol, mass and height.

Variables 227 and 228: Blood Pressure: Diastole and Systole Readings

In table 5.138 the statistical analysis between age, gender, employment, income, smoking and drinking and diastolic and systolic blood pressure can be seen.

TABLE 5.138: STATISTICAL ANALYSIS SHOWING RESPONDENTS WITH INCREASE DIASTOLIC AND SYSTOLIC BLOOD PRESSURES

	N	Increased Diastolic Blood Pressure	Increased Systolic Blood Pressure
AGE			
>21-30	122	24 (21,2%)	18 (19,0%)
31-40	134	39 (34,5%)	30 (31,6%)
41-50	97	50 (44,3%)	47 (49,4%)
P Value		**p=0,001**	**p=0,001**
GENDER			
Males	142	49 (43,4%)	40 (42,2%)
Females	211	64 (56,6%)	55 (57,9%)
P Value		**p=0,539**	**p=0,445**
EMPLOYMENT			
Unemployed	201	63 (55,8%)	55 (57,9%)
Employed	152	50 (44,2%)	40(42,1%)
P Value		**p=0,170**	**p=0,39**
INCOME			
Income	149	43 (68,2%)	41 (74,6%)
No income	52	20 (31,8%)	14 (25,4%)
P Value		**p=0,436**	**p=0,411**
SMOKERS			
Smokers	174	57 (62,8%)	52 (67,4%)
Non-smokers	128	42 (37,2%)	31 (32,6%)
P Value		**p=0,927**	**p=0,587**
ALCOHOL CONSUMERS			
Alcohol consumers	155	58 (51,3%)	54 (56,8%)
Non-alcohol consumers	73	55 (48,7%)	31 (43,2%)
P Value		**p=0,411**	**p=0,045**

As described in paragraph 5.11 the classification of blood pressure, the diastolic and systolic pressures show that the degree of importance of each varies. A diastolic pressure should always be less than 90mmHg, during this time the ventricles rest. However, with increase in age, structural changes occur to the blood vessels and the heart. The elasticity of the walls of the blood vessels decreases. Consequently, the systolic pressure is increased when the ventricles contract as the resistance has increased. An increase in systolic pressure is thus seen with age (Smeltzer and Bare, 2000).

Hypertension is sometimes called the "*silent killer*" because people who have it are often symptom free. The number of respondents with an increased diastolic pressure (32,0%) and systolic pressure (26,9%) are similar findings to a study conducted in a low socio-economic Coloured area in the Cape Metropolitan area in which the self-reported hypertension levels were 32% (De Villiers, 1999). The risk for the development of a cardiovascular disease is increased with the consumption of alcohol and cigarette smoking; the increased stress levels related to unemployment and having no financial income (Smeltzer and Bare, 2000).

Tables 5.139 and 5.140 show the data obtained about blood pressure readings. Table 5.139 shows that 113 (32,0%) have above normal diastolic reading and table 5.140 shows that the systolic reading is above normal, 95 (26,9%).

TABLE 5.139: BLOOD PRESSURE: DIASTOLIC READING (N=353)

	N	%
Normal	216	61,2
Below normal	24	6,8
Above normal	113	32,0

TABLE 5.140: BLOOD PRESSURE: SYSTOLIC READING (N=353)

	N	%
Normal	230	65,2
Below normal	28	7,9
Above normal	95	26,9
TOTAL	**353**	**100,0**

Variable 229: Pulse Rate

The majority of respondents, 342 (96.9%) have a normal pulse rate as shown in table 5.141. Only one respondent with a dysrythmia, namely a pulsus bigeminus with an increased blood pressure and cholesterol, was identified and referred for further investigation.

TABLE 5.141: PULSE RATE (N=353)

	N	%
Normal	342	96,9
Bradycardia	0	0,0
Tachycardia	11	3,1
TOTAL	**353**	**100,0**

Variable 230: Respiration Rate

Table 5.142 shows that the majority have a normal respiration rate. However, 16 (4.5%) have tachypnoea, this is related to the respiratory diseases present (Paragraph 5.10)

TABLE 5.142: RESPIRATORY RATE (N353)

	N	%
Normal	337	95,5
Bradypnea	0	0,0
Tachypnoea	16	4,5
TOTAL	**353**	**100,0**

Variable 231: Haemoglobin

The haemoglobin levels of all respondents were tested with the help of a haemoglobin apparatus. The normal haemoglobin levels for males are between13-18g/100ml of blood and for females between 12-16g/100ml of blood (Marieb, 1998).

Table 5.143 shows that a significant number of respondents 54 (15,3%) have low haemoglobin. A further analysis shows that 28 (19,7%) males and 26 (12,3%) have low haemoglobin. Low haemoglobins are found among the socio-economic levels as follows: upper-middle economic level: 15 (12,2%); low economic level (formal housing) 24 (18,1%) and informal housing 15 (15,5%).

Among the unemployed 33 (16,5%) and those without any income 7 (13,5%). Age distribution is as follows: 21 to 30years: 13 (10,7%), 31-40 years: 20 (14,9%) and 41 to 50years: 21 (21,7%).

It has already been shown in paragraph 5.5 that fresh vegetables are consumed at least once a week by 41 (11,6%), 22 (6,2%) seldom and never by 7 (2%). It has been determined that red meat is consumed at least once a week by 56 (15,9%), 26 (7,4%) seldom and 10 (2,8%) never.

A diet poor in green vegetables and red meat may contribute to low a haemoglobin. It appears that the socio-economic levels of the respondents affect the health status of the respondents.

TABLE 5.143: HAEMOGLOBIN (N=353)

	N	%
Normal	296	83,9
Below normal	54	15,3
Above normal	3	0,8
TOTAL	**353**	**100,0**

In conclusion, it appears that the diet of the respondents influences the low levels of haemoglobin. Although there are other causes not explored that may cause low haemoglobin, in this study it has been shown that the socio-economic level has an effect on the haemoglobin level of the respondent and thus on the health status of the individual.

Variable 232: Haemoglucotest

A casual screening test to determine the blood glucose levels were done on all

respondents with the help of an Acutrend apparatus. Casual is defined as any time of day without any regard to the time of the last meal (American Diabetes Association, 1998) The apparatus was calibrated before every use. In healthy people, the fasting blood glucose. The normal blood glucose levels used for this study 4-7,8 mmol/l (Boehringer Mannheim, 1999).

Table 5.144 shows that 23 (6,5%) of the respondents have a measurement above normal. It was identified during the assessment that these respondents were all suffering from diabetes mellitus. Paragraph 5.11, shows that 13 (3,7%) respondents were already aware that they had the disease, while 10 (2,8%) new cases were diagnosed. Respondents with high blood glucose readings are 9 (6,3%) males and 14 (6,6%) females. A further analysis shows that 77 (21,8%) of the respondents had a blood glucose level below normal, 25 (17,6%) were male and 52 (24,6%) female. 52 (67,5%) respondents of this sample were unemployed and 12 (15,6%) had no income. Age distribution varied: 21 to 30 years: 33 (27,1%); 31 to 40 years: 28 (20,9%) and 41 to 50 years (16,5%). It was a concern that 77 (21,8%) of the total sample N=353 were found to be hypoglycaemic, haemoglucotest was below normal. The researcher identified in all these cases that the respondents had not had any breakfast and lunch by the time their tests were done. This is a concern as these people form the workforce of the country and if they do not have adequate nutrition, they will lack energy. Consequently they become less productive with negative results for the economy.

TABLE 5.144: HAEMOGLUCOTEST (N=353)

	N	%
Normal	253	71,7
Below normal	77	21,8
Above normal	23	6,5
TOTAL	**353**	**100,0**

In conclusion, a normal blood glucose analyses is essential. As described above glucose is a source of energy therefore it is essential to maintain a normal level to ensure homeostasis. The brain is entirely dependent on glucose for energy; implications of low blood glucose may lead to a hypoglycaemic coma and death.

A high blood glucose is also unacceptable, the cells will not receive the energy they require, and this can lead to a hyperglycaemic coma.

Variables 233, 234 and 235: Urinalysis

Table 5.145 shows the results of a urine analysis. Tests were done specifically for blood, protein, and glucose but the leucocytes were also determined. The data obtained shows that 35 (9,9%) respondents had blood in the urine: males 3 (2,1%) and females 32 (15,2%); 12 (3,4%) had protein, 8 (5,6%) males and 4 (1,9%) females;18 (5,1%) had glucose: 8 (5,6%) males and 10 (4,7%) females; and 33 (9,3%) respondents had leucocytes in the urine which indicated that an urinary tract infection was present. These results show that kidney function abnormalities are present. However, the presence of glucose in the urine is an indication that the blood glucose levels are not being maintained adequately and need subsequent investigations for diabetes mellitus. The researcher confirmed that respondents that were identified with the high blood glucose levels were associated with the presence of glucose in the urine.

The presence of leucocytes in the urine indicated a possible urinary tract infection. This result confirmed the clinical manifestations that were identified in paragraph 5.10 of the presence of a possible urinary tract infection. The presence of protein and blood in the urine needs more investigation, as kidney problems could be present.

TABLE 5.145: URINALYSIS (N=353)

(a) Blood	N	%
Yes	35	9,9
No	318	90,1
(b) Protein	**N**	**%**
Yes	12	3,4
No	341	96,6
(c) Glucose	**N**	**%**
Yes	18	5,1
No	335	94,9
(d) Leucocytes	**N**	**%**
Yes	33	9,3
No	320	90,7

In conclusion: The normal functioning kidney will retain all red blood cells, protein, and glucose for the body (Marieb, 1998) and the presence of leucocytes in the urine is a sign of possible infection (Smelzer and Bare, 2000).

Variable 236: Cholesterol

A blood cholesterol test was done on all the respondents with the help of an Acutrend apparatus. The apparatus was calibrated and cleaned with alcohol before every use. This was done to prevent contamination of bloods and ultimately ensure the reliability and validity of the tests. This was a screening test for cholesterol and any individual with an abnormal reading was referred to a doctor for further investigations.

Table 5.146 shows an analysis of the data obtained about the cholesterol measurements. The cholesterol values obtained were interpreted according to the age of the individual; this determined the risk for the development of a cardiovascular disease (CVD). Increased cholesterol levels at a young age, increase the risk to develop a CVD. The cholesterol action limits guide of the Heart Foundation of South Africa was used to interpret the results. The classification is as follows:

- Desirable cholesterol levels: The risk to develop a CVD disease increases x1 without hypertension and smoking, x2 if the individual has hypertension, x3 who smokes and x4 if the individual smokes and has hypertension.
- Moderate CHD risk levels: The risk to develop a heart disease increases x2 without hypertension and smoking, x4 if the individual has hypertension, x6 who smokes and x10 if the individual smokes and has hypertension.
- High CHD risk levels: The risk to develop a heart disease increases x4 or more without hypertension and smoking, x7 if the individual has hypertension, x8 who smokes and x13 if the individual smokes and has hypertension.

The data obtained in the study according to this classification shows that:

(a) 11 (3,1%) respondents with a high CVD risk and smoke-risk to develop CVD is increased 8 times.

(b) 2 (0,6%) with a high CVD risk who smoke and have hypertension-risk to

develop CVD is increased 10 times.

(c) 40 (11,3%) respondents with a moderate CVD risk and who smoke-risk increases 6 times

(d) 22 (6,2%) respondents with a moderate CVD risk who smoke and have hypertension-risk increases 10 times.

(e) 78 (22,1%) respondents with desirable cholesterol values, who have hypertension-risk increases 2 times.

(f) 42 (11,9%) respondents with desirable cholesterol values, who smoke and have hypertension, risk increases x4 times.

The respondent's risk for the development for a cardiovascular disease was determined according to the classification.

It is alarming to note that 104 (29,5%) respondents are a moderate risk for cardiovascular disease, 11 (3,1%) a high-risk and 4 (1,1%) a very high-risk. In total 119 (33,7%) are at risk to develop a cardiovascular disease.

A further analysis shows the following:

- An association between the age group and a moderate risk exists: 37 (30,3%) of the respondents between the ages 21-30 years have been identified, 34 (25,6%) respondents of the age group 31-40 years, and 33 (34,0%) 41-50 years.
- An association between the age group and a high-risk exists: 4 (3,0%) of the respondents of the age group 31-40 years and 7 (7,2%) of the age group 41 to 50 years
- An association between age group and a very high-risk: 2 (1,5%) respondents of the age group 31 to 40 years and 2 (2,1%) of the age group 41-50 years

The risk for developing a cardiovascular disease is further aggravated by the high percentage of respondents with hypertension, 113 (32,0%) discussed in this section, and the large number of respondents that are overweight, 194 (55,1%). Associations between those respondents who never limit their fat intake and cholesterol levels are as follows: moderate risk 28 (26,9%), high-risk 2 (18,2%) and very high-risk 1 (25%).

Associations between those who almost never exercise N=247 and cholesterol levels are: 72 (29,1%) at a moderate risk, 7 (2,8%) at a high-risk and 3 (1,2%)

are at a very high-risk to develop cardiovascular disease.

Associations between those who almost never avoid smoking N=174 and cholesterol levels are: 47 (27,0%) at a moderate risk, 6 (3,4%) at a high-risk and 2 (1,1%) at a very high-risk, these respondents are all at risk to develop a cardiovascular disease.

Associations between those respondents who almost never avoid drinking alcohol N=102, and cholesterol levels are: 21 (20,6%) of moderate risk to develop CVD. and 2 (2,0%) at high-risk for the development of a CVD.

TABLE 5.146: CHOLESTEROL (N=353)

	N	%
Desirable: < 5,0mmol/L	233	66,2
Moderate risk: 5,0 to 6,5 mmol/L	104	29,5
High-risk: 6,5 to 7,8 mmol/L	11	3,1
Very high-risk: > 7,8 mmol/L	4	1,1
TOTAL	**353**	**100,0**

In conclusion, the researcher has shown a few associations between high-risk behaviours and the respondents' cholesterol levels and the risk for determining a cardiovascular disease. Therefore an association exists between the risk for the development of cardiovascular disease and the lifestyle of respondents as discussed above. In conclusion, it is shown that there is an association between respondents' lifestyle and their health status.

Variable 237: Height and Mass

The calculation to determine whether the mass was normal, below or above normal levels was done according to tables supplied by Boehringer Mannheim (1998). These tables have been based and designed on international data and are used internationally for all types of people. The mass, length, age and gender were specifically used to determine the ideal mass and categorised as normal or above or below normal. For the purpose of this study the body mass index (BMI)

was not calculated as the data required were to determine if individuals were overweight, underweight or of normal weight.

Table 5.148 shows that only 125 (35,5%) of the respondents are of normal mass, while 33 (9,4%) are underweight and 194 (55,1%) are overweight. The age distributions for respondents who are underweight are:

- 14 (11,5%) between 21 to 30 years, 10 (7,5%) of the age group 31 to 40 years, and 9 (9,3%) of the age group 41 to 50 years, More males 26 (18,3%) are underweight than females, 7 (3,3%).

Many of the respondents who are overweight 194 (55,1%) eat incorrectly and claimed that they love food; it is part of the culture. An analysis of respondents who are overweight are as follows: age distribution: 57 (46,7%) respondents between 21 to 30 years, 78 (58,7%) respondents of the age group 31-40 years, and 59 (60,8%) of the age group 41 to 50 years. 51 (35,9%) males and 143 (68,1%) females are overweight. However,

- The association between the consumption of beer and the mass of the respondents (p=0,01) is statistically significant.
- The association between the use of wine and the mass of the respondents (p=0,001) is statistically significant.
- The association between the consumption of spirits and the mass of the respondents p=0,03 is statistically significant.
- The association between the availability of money for food and the mass of the respondents p=0,007 is statistically significant.
- The association between exercise and the mass of the respondents (p=0,05) is statistically significant.
- The association between doing vigorous exercise for 15 to 30 minutes at least three times per week (p=0,04) is statistically significant.

According to the above p-values, cholesterol and various high-risk behaviours were associated with measurements including the height and mass. It appears that the lifestyle of respondents influences the health status.

The hypotheses are accepted "there is an association between the various factors influencing the health status of the Coloured people of the Western Cape" as defined for the purpose of this study. "There is an association between the health status and lifestyles of the Coloured people of the Western Cape as defined for the purpose of this study"

TABLE 5.147: HEIGHT AND MASS (N=353)

	N	%
Normal	125	35,5
Underweight	33	9,4
Overweight	194	55,1
TOTAL	**353**	**100,0**

Variable 238: Referred to a doctor (N=353)

The study was also applied as a community project. A problem that was identified and required medical attention was referred to the nearest day hospital or private doctor. Table 5.148 shows the number of referrals. 103 (29,2%) respondents were referred. Table 5.149 shows an analysis of the types of problems that were referred.

TABLE 5.148: REFERRED TO A DOCTOR (N=353)

	N	%
Yes	103	29,2
No	250	70,8
TOTAL	**353**	**100,0**

Hypertension (71,8%) ranks the highest of all the conditions followed by diabetes mellitus (14,6%). As discussed in this section, hypertension is a "Silent Killer" (Smeltzer and Bare, 2000) there are many members of the public that are not aware that they have a high blood pressure as there are no signs and symptoms.

TABLE 5.149: ANALYSIS OF PROBLEMS REFERRED TO A DOCTOR OR NEAREST DAY HOSPITAL (N=103)

REFERRALS	TOTAL	%
CARDIOVASCULAR: Hypertension 61(59.2) High Cholesterol 13 (12.6%)	74	71,8
RESPIRATORY: Bronchospasm 2(1.9%) Tuberculosis 1 (0.9%) Chest problem 1 (0.9%) Coughing 2(1.9%)	6	5,8
ENDOCRINE: Diabetes mellitus: 15 (14.6%)	15	14,6
GYNAECOLOGICAL AND OBSTETRICS: Pregnancy: 1 (0.9%) Metorrhagia: 1(0.9%) Vaginitis: 2 (1.9%)	4	3,9
UROLOGY: Bladder and kidney 3 (0.8%) Enlarged prostrate gland 1 (0.3%) Urinary tract infection: 5 (1.4%)	9	2,5
BREAST (MAMMA) Engorged painful breasts 1 (0.9%) Lump in breast 1 (0.9%) Painful breasts 1 (0.9%)	3	2,9
MUSCULO-SKELETAL: Backache 1 (0.9%) Foot infection 1 (0.9%)	2	1,9
HAEMATOLOGICAL: Anaemia	4	3,9

Variable 239: Receive health education

The researcher also applied the study as a community project, helping respondents with physical, social, and psychological problems. All respondents were given health education with reference to the factors influencing a healthy lifestyle. It was then identified that limited knowledge existed among the majority of the respondents.

TABLE 5.150: RECEIVED HEALTH EDUCATION (N=353)

	N	%
Yes	353	100,0
No	0	0,0
TOTAL	**353**	**100,0**

5.12 SECTION K: HEALTH-STYLE SELF-TEST

The section consisted of a health-style self-test. The test emphasized 6 behaviours addressed in sections B, C, D of the questionnaire that contribute to an individual's lifestyle. This self-test was used to support the reliability and validity of the study, it enabled the researcher to cross check data that was obtained. The following items were addressed in this section:

- Cigarette smoking
- Alcohol and drugs
- Eating habits
- Exercise and fitness
- Stress control
- Safety

Secondly, this test was completed to make the respondents aware of the following:

- Good health habits that were being practised
- High-risk behaviour being practised having an effect on the health status.
- Behavioural changes required to improve the health status

The respondents were given a short explanation about the health-style self-test. They were informed that the test gave them an opportunity to create an awareness of the lifestyle they were following; it enabled them to identify needs and how to address these. The approach was that the researcher would read the question slowly in the first person and the respondent would then repeat it. With this approach the patients almost immediately react with statements such as "*No, I don't eat that way*".

The data was obtained and various associations were made, with the objective test measurements, biographical data and cultural and religious data.

A. CIGARETTE SMOKING

Variables 240, and 241: Cigarette Smoking

Tables 5.151 and 5.152 show a complete analysis of the use of cigarettes. Only 117 (33,1%) respondents abstain completely from smoking. A gender analysis shows that 80 (56,3%) males and 94 (44,6%) females almost never avoid smoking. The age groups show that 59 (48,4%) respondents are between 21 to 30 years, 64 (47,8%) between 31-40 years, and 51 52,6%) between 41 to 50 years. As discussed in paragraph 5,12, section J further aggravating factors are that 141 (50,0%) of the total sample who smoke have stress; 57 (32,8%) of all smokers who are unable to avoid smoking have a high diastolic blood pressure and 52 (29,9%) have a high systolic pressure; furthermore 37 (36,3%) of all alcohol users who are unable to avoid consuming alcohol, have a high systole and 39 (38,2%) have a high diastole.

Table 5.152 shows an analysis of the type of cigarettes preferred. During the interviews the respondents who smoke, indicated that they prefer smoking a cigarette. No other types of smoking were identified. Cigarette smoking is a health hazard and contributes to diseases such as chronic lung disease, cardiovascular (Smeltzer and Bare, 2000).

The risk for the development of a cardiovascular disease increases with the consumption of alcohol and cigarette smoking; this is aggravated by the increased stress levels, unemployment and no financial income (Smeltzer and Bare, 2000). In conclusion, the socio-economic circumstances do influence the health status of an individual.

TABLE 5.151: CIGARETTE SMOKING (N=353)

I avoid smoking cigarettes	N	%
Almost always avoid smoking	59	16,7
Sometimes avoid smoking	3	0,8
Almost never avoid smoking	174	49,3
Not applicable (Never smoke)	117	33,1
TOTAL	**353**	**100,0**

TABLE 5.152: TYPE OF SMOKING (N=353)

I smoke only low tar and nicotine cigarettes or I smoke a pipe or cigars.	N	%
Almost always smoke cigarettes or pipe	171	48,4
Sometimes smoke cigarettes or pipe	8	2,3
Almost never smoke cigarettes or pipe	56	15,9
Not applicable (Never smoke)	118	33,4
TOTAL	**353**	**100,0**

B. ALCOHOL AND DRUGS

Variable 242: Alcohol and Drugs

Table 5.153 shows an analysis of the consumption of alcohol; 102 (28,9%) of the respondents almost never avoid drinking alcohol while 144 (40,8%) do not drink alcohol at all. A gender analysis shows that 63 (44,4%) males and 39 (18,5%) females almost never avoid drinking alcohol. The age groups show that 39 (32%) respondents are between 21 to 30 years, 35 (26,1%) between 31 to 40 years, and 28 (28,9%) between 41 to 50 years. A significant number 85 (30,1%) of alcohol users also experience stress.

Alcohol remains an example of high-risk behaviour that influences the health status of an individual adversely. As described in paragraph 5.12, section J the consumption of alcohol together with a high blood pressure, increased stress levels, smoking, unemployment, and no financial income are factors that contribute to the development of a cardiovascular disease. Therefore, the lifestyle of the respondent, together with the socio-economic levels, influences the health status of the individual.

TABLE 5.153: ALCOHOL AND DRUGS (N=353)

I avoid drinking alcoholic beverages or I drink no more than one or two drinks a day.	N	%
Almost always avoid drinking alcohol	93	26,3
Sometimes avoid drinking alcohol	14	4,0
Almost never avoid drinking alcohol	102	28,9
Not applicable	144	40,8
TOTAL	**353**	**100,0**

Variable 243: Consumption of alcohol or other drugs to manage stress

In table 5.154, the consumption of alcohol or other drugs to manage stress is shown; 38 (10,8%) of respondents almost never avoid using drugs or alcohol to manage stress. A gender analysis shows that 16 (11,3%) are males and 22 (10,4%) are females. Among those who are unemployed, 25 (12,5%) never avoid consuming alcohol or other drugs to manage stress in comparison to those who are employed, 13 (8,5%). As already described in paragraph 5.6 excess stress may cause problems such as cardiovascular disease, asthma, and gastro-intestinal problems. The risk of developing a psychosomatic disease increases further if the stress is compounded with an increase in blood pressure, smoking and abuse of alcohol (Smeltzer and Bare, 2000).

TABLE 5.154: CONSUMPTION OF ALCOHOL OR OTHER DRUGS TO MANAGE STRESS (N=353)

I avoid consuming alcoholic or other drugs (especially illegal drugs) as a way of handling stressful situations or the problems in my life.	N	%
Almost always	170	48,2
Sometimes	6	1,7
Almost never	38	10,8
Not applicable	139	39,4
TOTAL	**353**	**100,0**

Variable 244: Consumption of alcohol when taking certain medicines

Table 5.155 shows that there is a small percentage, 38 (10,8%) respondents who are almost never careful not to drink alcohol when taking medicines. This figure may be small, but it is significant when compared with the population at large, as it may have harmful effects on the body, especially affecting the central nervous system (Kozier *et al.*, 2000). The data obtained brings about an awareness to the health professionals that there is a significant percentage of people in the population that tend to consume alcohol with medications. Health education can thus be guided more appropriately and used to address the problems in the community.

TABLE 5.155: CONSUMPTION OF ALCOHOL WHEN TAKING CERTAIN MEDICINES (N=353)

I am careful not to drink alcohol when taking certain medicines (for example, medicine for sleeping, pain, colds, and allergies), or when pregnant.	N	%
Almost always	198	56,1
Sometimes	2	0,6
Almost never	12	3,4
Not applicable	141	39,9
TOTAL	**353**	**100,0**

Variable 245: Reading Label Directions of Medications

Table 5.156 shows that respondents 329 (93,2%) read the label instructions of medications.

TABLE 5.156 READING LABEL DIRECTIONS OF MEDICATIONS (N=353)

I read and follow the label directions when using prescribed and over-the-counter drugs	N	%
Almost always	329	93,2
Sometimes	11	3,1
Almost never	11	3,1
Not applicable	2	0,6
TOTAL	**353**	**100,0**

The respondents indicated to the researcher that the detail of the medication is not read, but the method of use will always be read. Only 11 (3,1%) respondents will sometimes read the instructions while there are 11 (3,1%) who just never read instructions. The 2 (0,6%) who responded to "*not applicable*" are illiterate.

C EATING HABITS

Variable 246: Eating a Food Variety of Foods per Day

Table 5.157 shows that 75 (21,2%) respondents, 23 (18,2%) males and 52 (24,6%) almost never have a variety of foods per day. Among the unemployed, 53 (26,5%) never have a variety of foods per day and 48 (24,0%) indicated sometimes. As discussed in paragraph 5.5, section C, a balanced diet is essential to prevent deficiency diseases from occurring (Kozier *et al.*, 1995). It has already been identified in the study that there is an association between the diet of the respondents and their health status.

TABLE 5.157: EATING A VARIETY OF FOODS PER DAY (N=353)

I eat a variety of foods each day, such as fruits and vegetables, whole grain breads and cereals, eat meats, dairy products, dry peas and beans, and nuts and seeds.	N	%
Almost always	197	55,8
Sometimes	81	22,9
Almost never	75	21,2
TOTAL	**353**	**100,0**

Variable 247: Consuming fat, saturated fat and cholesterol

Table 5.158 shows that 197 (55,8%) of the respondents will always limit their fat, saturated fat, and cholesterol; while it is a concern that 62 (17,6%) respondents sometimes monitor their fat intake and 94 (26,6%) almost never limit their fat, saturated fat, and cholesterol. A gender analysis shows that 37 (26,1%) are males and 57 (27,0%) are females.

Age distributions of respondents who never monitor their fat intake are: 33 (27,1%), between 21 to 30years, 41 (30,6%) of the age group 31 to 40 years, and 20 (20,6%) of the age group 41-50 years. This explains the high cholesterol values that were obtained, as explained in paragraph 5.12, section J. 119 (33,7%) of the respondents are at risk to develop cardiovascular diseases.

TABLE 5.158: CONSUMING FAT, SATURATED FAT, AND CHOLESTEROL (N=353)

I limit the amount of fat, saturated fat, and cholesterol I eat (including fat on meats, eggs, butter, cream, shortenings and organ meats such as liver).	N	%
Almost always	197	55,8
Sometimes	62	17,6
Almost never	94	26,6
TOTAL	353	100,0

Variable 248: Consumption of Salt

Table 5.159 shows that 224 (63,5%) almost always limit their salt intake, however 48 (13,6%) sometimes limit their salt intake, 81 (22,9%) never limit their salt intake. A gender analysis shows that 33 (23,2%) are males and 48 (22,8%) are females. Age distributions of respondents who never monitor their salt intake are: 29 (23,8%), between 21 to 30years, 33 (24,6%) of age group 31 to 40 years, and 19 (19,6%) of age group 41 to 50 years. Monitoring salt consumption is essential as salt retains water and increases the blood pressure. This is an aggravating problem in especially hypertensive respondents as discussed in

paragraphs 5.5.

The study has shown that 119 (32,0%) of the respondents have an increased diastolic pressure and 95 (26,9%) an increased systolic pressure (Paragraph 5.12).

TABLE 5.159: CONSUMPTION OF SALT (N=353)

I limit the amount of salt I eat by cooking with only small amounts, not adding salt at the table, and avoiding salty snacks.	N	%
Almost always	224	63,5
Sometimes	48	13,6
Almost never	81	22,9
TOTAL	**353**	**100,0**

Variable 249: Consumption of Sugars

Table 5.160 shows that fewer respondents monitor their sugar intake when compared with the salt intake; 172 (48,7%) respondents almost always avoid eating too much sugar, while 74 (21,0%) sometimes monitor their sugar intake 107 (30,3%) almost never. The data is significant, as already discussed paragraph 5.5. the sedentary lifestyle of the Coloured people, the fact that 70,0% of the population almost never do vigorous exercise at least three time per week, a diet high in sugars and fats as discussed in this section contributes to obesity. In paragraph 5.12, section J it is shown that 55,1% of the population is overweight.

A gender analysis shows that 50 (35,2%) are males and 57 (27,0%) are females who almost never avoid their sugar intake.

Age distributions of respondents who never monitor their sugar intake are: between 21 to 30years, 47 (38,5%), 31 to 40 years, 38 (28,4%) and 41 to 50, 22 (22,7%). In paragraph 5.5, a balanced diet is described. Together with the factors as described above and a high intake of sugar will lead to obesity and ultimately a risk for cardiovascular disease (Kozier *et al.*, 2000; Smeltzer and Bare, 2000).

TABLE 5.160: CONSUMPTION OF SUGARS (N=353)

I avoid eating too much sugar (especially frequent snacks of sticky candy or soft drinks).	N	%
Almost always	172	48,7
Sometimes	74	21,0
Almost never	107	30,3
TOTAL	**353**	**100,0**

D EXERCISE AND FITNESS

Variable 250: Maintain a desired mass, avoiding being overweight and underweight

Table 5.161 shows a significant number of respondents 124 (35,1%) who almost never maintain their desired mass, avoiding being overweight or underweight a significant number 46 (13,0%) monitor their mass sometimes. A gender analysis shows that 42 (29,6%) are males and 82 (38,9%) are females.

Age distributions of respondents who never monitor their mass are: 36 (29,5%); between 21 to 30years, 50 (37,3%) 31 to 40 years, and 38 (39,1%) 41 to 50 years of age. The age distribution shows that the mass of an individual increases with age. The basal metabolic rate decreases with age, consequently individuals tend to gain weight, as they get older. Females are more overweight than males, this is because the metabolic rate of a female is slower than that of a male and they thus tend to gain more weight than the males. This is a natural tendency, but in this study, there are also other factors influencing their weight. As already discussed, in this section and in paragraphs 5.6, 5.7 and 5.12 there is an association between the weight of a respondent and the diet, exercises, lifestyle and cultural habits.

TABLE 5.161: MAINTAIN A DESIRED MASS, AVOIDING OVERWEIGHT AND UNDERWEIGHT (N=353)

I maintain a desired mass, avoiding overweight and underweight.	N	%
Almost always	183	51,8
Sometimes	46	13,0
Almost never	124	35,1
TOTAL	**353**	**100,0**

Variable 251: Vigorous Exercises

It is disheartening to note in table 5.162 that only 82 (23,2%) do vigorous exercise at least three times per week, while 247 (70,0%) almost never do exercise of which 85 (59,9%) are males and 162 (76,8%) are females. The data obtained in this section contradicts the data obtained in 5.6 namely that 165 (46,7%) of the respondents do regular exercise. However, of these 72 (43,6%) indicated that they exercise daily and 52 (31,5%) three times per week. As discussed in paragraph 5.6 many respondents do much walking to perform their daily activities such as to get the taxi, train, these respondents regarded this as their form of exercise, but do not do vigorous exercises.

TABLE 5.162: VIGOROUS EXERCISES (N=353)

I do vigorous exercises for 15 to 30 minutes at least three times a week (examples include running, swimming, brisk walking).	N	%
Almost always	82	23,2
Sometimes	24	6,8
Almost never	247	70,0
TOTAL	**353**	**100,0**

Variable 252: Exercises to enhance muscle tone

Table 5.163 show that (78,8%) almost never do exercises to enhance the muscle tone, 20 (5,7%) indicated sometimes. Only 55 (15,6%) indicated that they almost

always exercise to improve their muscle tone. Regular exercise enhances an individual's health, including all systems especially the cardiovascular status, mental activity, and respiratory status (Kozier et al., 2000; Smeltzer and Bare, 2000).

TABLE 5.163: EXERCISES TO ENHANCE MUSCLE TONE (N=353)

I do exercises that enhance my muscle tone for 15 to 30 minutes at least three times a week (examples include yoga and callisthenics).	N	%
Almost always	55	15,6
Sometimes	20	5,7
Almost never	278	78,8
TOTAL	**353**	**100,0**

Variable 253: Use of leisure time participating in family or team activities

Table 5.164 shows that the majority of the respondents, 228 (64,6%) have indicated that they almost always participate in family activities not necessarily gardening or playing golf as indicated. Many of these leisure time activities are very passive as shown in paragraph 5.6. Only 10 (3,7%) indicated that they participated in family activities. However, 137 (51,1%) who indicated "other" spend their leisure time watching television and videos. These measures such as watching television, do not necessarily relieve the stress of the individuals. A more active form of stress relief should be applied (Kozier *et al.,* 2000; Smeltzer and Bare, 2000).

TABLE 5.164: USE OF LEISURE TIME PARTICIPATING IN FAMILY OR TEAM ACTIVITIES (N=353)

I use part of my leisure time participating in individual, family, or team activities that increase my level of fitness (such as gardening, bowling, golf, and baseball).	N	%
Almost always	228	64,6
Sometimes	27	7,6
Almost never	98	27,8
TOTAL	**353**	**100,0**

E STRESS CONTROL

Variable 254: I have a job or do other work that I enjoy

Table 5.165 shows that 261 (73,9%) have a job or do other work they enjoy. A smaller, but significant percentage 57 (16,1%), sometimes enjoy what they do and 35 (9,9%) indicated they almost never have a job or do other work that they enjoy. The researcher is concerned that there are respondents who indicated that they almost never have a job or do other work that they enjoy. An individual spends the greater part of his / her life at the place of employment and this needs to be enjoyed. A frustrated and unhappy worker is not productive and this may affect the family. Support systems should be in place to promote and enhance the quality of life of respondents in the work place.

TABLE 5.165: I HAVE A JOB OR DO OTHER WORK THAT I ENJOY (N=353)

I have a job or do other work that I enjoy.	N	%
Almost always	261	73,9
Sometimes	57	16,1
Almost never	35	9,9
TOTAL	**353**	**100,0**

Variable 255: I find it easy to relax and express my feelings freely

Table 5.166 shows that the majority of the respondents, 268 (75,9%) almost always find it easy to relax and express their feelings freely. However, 31 (8,8%) sometimes find it easy to relax and express their feelings while 54 (15,3%) almost never find it easy to express their feelings. This is a concern as stress levels may increase and ultimately cause psychosomatic diseases (Kozier *et al.*, 2000; Smeltzer and Bare, 2000).

A gender analysis shows that 21 (14,8%) are males and 33 (15,6%) are females who almost never find it easy to express their feelings freely, while 110 (77,5%) and 158 (74,9%) always find it easy to express their feelings respectively.

TABLE 5.166: I FIND IT EASY TO RELAX AND EXPRESS MY FEELINGS FREELY (N=353)

I find it easy to relax and express my feelings freely	N	%
Almost always	268	75,9
Sometimes	31	8,8
Almost never	54	15,3
TOTAL	**353**	**100,0**

Variable 256: I recognize early, and prepare for, events or situations likely to be stressful for me

Table 5.167 shows that the majority of the respondents, 280 (79,3%) almost always recognize and prepare for events or situations likely to be stressful. However, 49 (13,9%) responded to "*sometimes*" and 24 (6,8%) to "*almost never*". Despite that, only 13,9% of the respondents almost never recognize of prepare for events or situations, this can be significant as the prevention or stress has long-term positive effects on the individual. Courses in the management and prevention of stress should be presented to the communities in workshops. These should be designed within the framework of all socio-economic and educational levels.

TABLE 5.167: I RECOGNIZE EARLY, AND PREPARE FOR, EVENTS OR SITUATIONS LIKELY TO BE STRESSFUL FOR ME (N=353)

I recognize early, and prepare for, events or situation likely to be stressful for me.	N	%
Almost always	280	79,3
Sometimes	49	13,9
Almost never	24	6,8
TOTAL	**353**	**100,0**

Variable 257: I have close friends, relatives, or others whom I can talk to about personal matters and call on for help when needed

Table 5.168 shows that the majority of the respondents have friends, relatives or others whom they can call on for help when needed. This strongly relates with paragraph 5.6 about the support systems of respondents. 293 (83,0%) indicated that they had a support system to rely on when stressed. The various types of support systems of the respondents are also shown. Managing stress promotes good health (Kozier *et al.*, Smeltzer and Bare, 2000).

TABLE 5.168: I HAVE CLOSE FRIENDS, RELATIVES, OR OTHERS WHOM I CAN TALK TO ABOUT PERSONAL MATTERS AND CALL ON FOR HELP WHEN NEEDED (N=353)

Have close friends, relatives, or others whom I can talk to about personal matters and call on for help when needed.	N	%
Almost always	278	78,8
Sometimes	18	5,1
Almost never	57	16,1
TOTAL	**353**	**100,0**

Variable 258: I participate in group activities (such as church and community organizations) or hobbies that I enjoy

Table 5.169 shows that many respondents, 213 (57,5%) almost always

participate ingroup activities; 129 (36,5%) almost never participate in any type of group activity.

The researcher concludes that the majority of respondents are managing their stress levels adequately shown in the data obtained and as discussed above. The management of stress levels is essential for a healthy lifestyle.

TABLE 5.169: I PARTICIPATE IN GROUP ACTIVITIES (SUCH AS CHURCH AND COMMUNITY ORGANIZATIONS) OR HOBBIES THAT I ENJOY (N=353)?

I participate in group activities (such as church and community organizations) or hobbies that I enjoy.	N	%
Almost always	213	57,5
Sometimes	21	5,9
Almost never	129	36,5
TOTAL	**353**	**100,0**

F: SAFETY

Variable 259: I wear a seat belt when travelling in a car

According to the researcher, it is important to be conscious of taking safety precautions in whatever you do. Not being safety conscious can cause accidents, which can have devastating results on others. In a report of the Department of Transport, 1997-98 public offenders prosecuted for not wearing a seat belt accounted for 11,0%. Table 5.170 shows that 228 (64,6%) almost always wear a seat belt while travelling in a car. However, there are respondents who sometimes wear a belt 36 (10,2%) and 71 (20,1%) almost never wear a seat belt. A gender analysis shows that 29 (20,4%) are males and 42 (19,9%) are females.

The age distribution of respondents who almost never wear a seat belt: 26 (21,3%) between the ages 21-30 years; 26 (19,4%) of the age group 31 to 40 years, and 19 (19,6%) of the age group 41 to 50. There is not much difference between the ages.

According to the researcher's clinical experience it is imperative to wear a seat belt so that when an accident does occur, the driver or co-passengers are not thrown out of the car, thus a possible head injury or death is prevented.

TABLE 5.170: I WEAR A SEAT BELT WHEN TRAVELLING IN A CAR (N=353)

I wear a seat belt while travelling in a car	N	%
Almost always	228	64,6
Sometimes	36	10,2
Almost never	71	20,1
Not applicable	18	5,1
TOTAL	**353**	**100,0**

Variable 260: I avoid driving while under the influence of alcohol and other drugs

The Department of Transport has launched the "Arrive Alive - Don't Drink and Drive Campaign" in 1998 to bring an awareness about public safety on the roads to the public. It was widely advertised that when driving under the influence of alcohol, blood levels should not exceed 0.08gm per 100ml of blood. In the 1997-98 report of the Department of Transport, 8080 drivers were prosecuted for driving under the influence of alcohol.

Table 5.71 shows that 92 respondents are drivers who normally drink alcohol of whom 80 (87,0%) almost always avoid driving under the influence of alcohol or drugs, 4 (4,3%) sometimes avoid driving under the influence of alcohol and other drugs, while 8 (8,7%) indicated that they almost never avoid driving under the influence of alcohol and drugs. A gender analysis shows that 5 (3,5%) are males and 3 (1,4%) are females. This is a significant figure as many lives can be lost through the negligence of one driver.

TABLE 5.171: I AVOID DRIVING WHILE UNDER THE INFLUENCE OF ALCOHOL AND OTHER DRUGS: DRIVERS ONLY (=92)

I avoid driving while under the influence of alcohol and other drugs.	N	%
Almost always	80	87,0
Sometimes	4	4,3
Almost never	8	8,7
TOTAL	**353**	**100,0**

Variable 261: Obeying traffic rules and the speed limit when driving

In a report of the Department of Transport, 1997-98 public offenders prosecuted for speeding were 60% and 7% for disobeying traffic signals and signs. Table 5.172 shows that there are 108 respondents who are drivers and provides an analysis of how they obey the traffic rules and speed limits. It is disappointing to note that there are drivers that almost never obey the traffic rules and speed limits, namely 8 (7,4%) and 14 (13,0%) who sometimes obey the traffic rules and speed limits. A gender analysis is 6 (4,2%) males and 2 (1,0%) females.

TABLE 5.172 : I OBEY TRAFFIC RULES AND THE SPEED LIMIT WHEN DRIVING (N=108)

I obey traffic rules and the speed limit when driving.	N	%
Almost always	86	79,6
Sometimes	14	13,0
Almost never	8	7,4
TOTAL	**353**	**100,0**

Variable 262: I am careful when using potentially harmful products or substances (such as household cleaners, poisons, and electrical devices)

Table 5.173 shows that the majority of the respondents 333 (94,3%) are careful when working with potentially harmful substances or devices. A constant awareness must always exist within an individual as there are many potentially

harmful products a worker is exposed to in the work environment or at home. Exposure to harmful substances such as fibreglass particles, organo-phosphate poisoning may influence the health status of an individual (Kozier *et al.* 2000; Vlok, 1991).

TABLE 5.173: I AM CAREFUL WHEN USING POTENTIALLY HARMFUL PRODUCTS OR SUBSTANCES (SUCH AS HOUSEHOLD CLEANERS, POISONS, AND ELECTRICAL DEVICES) (N=353)

I am careful when using potentially harmful products or substances (such as household cleaners, poisons, and electrical devices).	N	%
Almost always	333	94,3
Sometimes	12	3,4
Almost never	7	2,0
Not applicable	1	0,3
TOTAL	**353**	**100,0**

Variable 263: I avoid smoking in bed

Table 5.174 shows the response of the respondents to smoking in bed. 118 (54,9%) almost always avoid smoking in bed; on the contrary, 89 (41,4%) almost never avoid smoking in bed and 8 (1,4%) sometimes avoid smoking in bed.

A gender analysis shows that 39 (27,5%) are males and 50 (23,7%) are females. Age distributions are between: 28 (23%) between 21 to 30 years, 34 (25,4%) of the age group 31 to 40 years, and, 27 (27,8%) of the age group 41-50 years.

An association exists between those who never avoid smoking and those who smoke in bed 78 (87,6%), while those who can never avoid drinking alcohol and who smoke in bed namely 33 (37,1%). Smoking is dangerous, especially if it is accompanied by the consumption of alcohol. The researcher's clinical experience has shown that many patients have been treated for burns because they fell off to sleep while smoking. Many of the respondents are from informal settlements, where a fire started in one shack has caused the destruction of many others. This certainly is a problem that can be prevented. Health education with the

emphasis on safety at home, that includes smoking in bed, should be introduced as a matter of urgency. The prevention of fires in the informal settlements is a priority as again witnessed in May 2000 when a fire destroyed a number of shacks in one of the informal settlements where some of the respondents live.

TABLE 5.174: I AVOID SMOKING IN BED: THE SMOKERS (N=215)

I avoid smoking in bed	N	%
Almost always	118	54,9
Sometimes	8	1,4
Almost never	89	41,4
TOTAL	**353**	**100,0**

5.13 CONCLUSION

An extensive analysis of the factors influencing the health status of the Coloured population has been completed. The qualitative data was analysed manually. Data obtained in all open-ended questions was studied for common themes and then quantified into categories. The frequencies with which these occurred was noted and percentages were calculated. The following types of statistical tests were applied in the analysis of the quantitative data

- Descriptive statistics
- Inferential statistics
- Associational statistical tests

The hypotheses set for this study are accepted. The following associations have been identified:

- An association does exist between the religious beliefs about health and health status of the Coloured people.
- An association exists between the ethno-cultural beliefs about health and the health status of the Coloured people.
- An association exist between the socio-economic status and health status of the Coloured people
- An association exists between the health status and various other biographical data.
- An association exists between various factors influencing the health status

of the Coloured people.

- An association exist between the lifestyle and health status of the Coloured people

The researcher concludes that through this study, the health status and the factors influencing the health status of the Coloured population of the Western Cape in an urban setting were identified, meeting the objectives as defined in chapter 1.

CHAPTER 6

RECOMMENDATIONS

6.1 INTRODUCTION

The South African government is currently concerned with bringing about equity in health care to all its citizens. Despite the fact that South Africa is classified as a middle income country with an estimated per capita GNP of US$2670 in 1992, spending 8,5% of the GDP (gross domestic product) on health care, the country exhibits major disparities and inequalities resulting largely from previous policies which ensured racial, gender and regional disparities (Department of Health, 1995). According to the World Development Bank Report, 1997, the GNP per capita for South Africa is more than US$3000 (Southern African Development Community, 1998). Despite this, economically the country is not able to meet the needs of its entire population because of the disparities of the past. The majority of the people are underdeveloped and of a low socio-economic level. The majority of the population of South Africa has inadequate access to basic services, including health, clean water, and basic sanitation. According to 1994 statistics, between (35%) and (55%) of the population live in poverty (Department of Health, 1995).

However, according to the researcher, despite the efforts of the Government and attempts at remedying the disparities of the past, bringing about equity in health care should be based on scientific evidence in order to provide appropriate health care. The researcher believes that the implementation of such a policy will ensure cost effectiveness. The researcher therefore decided to investigate the prevalence of factors influencing the health status of the Coloured people of the Western Cape. This population group is the largest in the Western Cape, being 60,8%. Its domination in this province determines the health status of the province. By acquiring knowledge about the factors influencing the health status of the Coloured population, it will be possible for the policy makers in health care to direct their emphasis on health care policies more appropriately. Currently differences in socio-economic and knowledge levels, with existing inequalities in

health, pose major challenges for the policy makers in health care. Therefore, knowledge about the health status, health practices and health beliefs of a population group could contribute to improving the average health status of the general population.

Objectives are specific measurable explanations of aims and will enable the researcher to decide if the problem has been solved. The following objectives are set for the research study: (Also refer to the limitations of the study)

- To determine the health status of economically active Coloured people in an urban area as defined with specific reference to the indicators as identified by the researcher
- To determine the prevalence of factors influencing the health status of economically active Coloured people in an urban area as defined.
- To determine the relationship between the health status and the factors influencing the health status of economically active Coloured people in an urban area as defined.
- To determine an association between factors influencing the health status of economically active Coloured people in an urban area as defined.
- To make recommendations to the health policy-makers concerning factors influencing the health status of the economically active Coloured people in an urban area as defined and possibly related ethnic groups.

These objectives were met through an in-depth research study of this population group. Factors influencing the health status of an individual as described in the literature, were investigated and described. The data analyses and interpretations of the findings based on the questionnaire used in this research project are described in chapter 5. The recommendations based on the findings described and discussed in chapter 5 are made in this chapter.

6.2 RECOMMENDATIONS

The research results as described and discussed in chapter 5 confirmed that the health status of the Coloured population is influenced by the following factors:

- Socio-economic Level (education, financial income and occupation)
- Lifestyle of Individuals (High Risk Behavioural Practices such as smoking, consumption of alcohol and illegal drugs, dietary intake, minimal exercise, stress management and leisure time)

- Ethno-cultural Beliefs: health and illness
- Religion: health and illness
- Environmental factors
- Health Services: accessibility and affordability of services

The recommendations will be made according to the above factors.

6.2.1 Socio-economic Level

The socio-economic level of individuals refers to:
(a) the educational level
(b) income level
(c) occupation level.

(a) Educational Level

As shown in paragraph 5.10 higher education levels are associated with fewer health problems, a decrease in the number of smokers, and fewer users of alcohol and illegal drugs. These findings are supported by Uitenbroek et al. (1996) as described in paragraph, 3.2. Higher levels of education are associated with an increase in the number of respondents who exercise regularly. The importance and value of exercising is associated with persons of higher education levels and from the middle-upper socio-economic level. Clark et al., (1995) and Lynch et al., (1997) in a study validate that the lower socio-economic status is associated with higher rates of smoking, obesity, and reluctance to exercise.

It is the belief of the researcher that there could be no better way to invest in the citizens of this country than by providing education and development. The strengths of a winning nation lie within the citizens of a country as expressed in the old Chinese proverb *" When planning for a year, plant corn. When planning for a decade, plant trees. When planning for life, train and educate people".*

Training and educating the people of the country will lay the foundation for a successful nation. Despite, the poverty currently experienced in the country, it will gradually give way to a healthy and productive nation if the people are educated

and developed.

While the Government of the day is aware of the disparities of the past, there is no short cut to remedying these disparities. A comprehensive approach in development is warranted.

Legislation has already been introduced to make education compulsory up to grade IX. According to the Sunday Times, 14 May 2000, compulsory preschool education will also be introduced. This policy is already being introduced in some provinces as from 2001, making ten years of basic education compulsory. However, implementation and the evaluation of such a policy is imperative. These laws must be enforced to bring about the social change, which is necessary in this country. Educators and parents must ensure that the children are educated, as it is only through the education of the present generation and generations to come that there will be social change. Vicious cycles exist within families in which the social pathology is self-perpetuating from one generation into the next such as the consumption of alcohol that leads to conflict and physical assault. Only enforced education and aggressive development programmes within communities will ensure that vicious cycles are broken.

The study shows that there is an association between health problems and the level of education. There were more respondents identified with health problems among respondents who have low levels of education, in comparison to those who have higher levels of education. Illustrated statistically, of the respondents who have no post-schooling education, N=261: (58,6%) have health problems.

The following data shows the high risk behaviours associated with low education levels:

An association between smoking and level of education exists:

- Of the respondents with no post schooling education, N=261: 153 (58,6%) smoke. This is equal to 43,3% of the total sample N=353.
- Of the respondents with a college diploma N=56:14(25%) smoke, equalling 4% of the total sample N=353.

An association between alcohol consumption and level of education exists:

- Of the respondents who had no post schooling education N=261: 110

(42,2%) were consuming alcohol, equalling 31,2% of the total sample N=353.

- Of the respondents who had a college diploma, N=56: 22(39,3%) consume alcohol, equalling 6,2% of the total sample N=353.
- The association between the consumption of beer and the mass of the respondents is statistically significant (p=0,01) as determined with the chi-square statistical test.
- The association between the consumption of wine and the mass of the respondents is statistically significant, (p=0,001) as determined with the chi-square statistical test.
- The association between the consumption of spirits such as whiskey, cane spirits, brandy and the mass of the respondents is statistically significant (p=0,03) as determined with the chi-square statistical test.

By means of education and aggressive development, the standard of living may improve, thus giving rise to modification in lifestyle behaviours within individuals. Empowerment will enable people to become aware of factors that contribute to a healthy lifestyle. Ultimately self-responsibility will ensue. This is the health outcome against which the Government must measure its interventions.

(b) Income

Job creation needs to be emphasised, as (56,9%) of the sample are unemployed, of these (14,7%) have no financial income. As described in paragraph, 5.3, the respondents undertake any type of self-employment even if it means selling scrap metal and paper to obtain an income.

Social development and upliftment are imperative and this depends not only on education but also on having employment with an income that will suffice the essential needs of a family.

According to Lahelma et al. (1997), the unemployed tend to have a poorer health status than their employed counterparts, consequently the unemployment rate may have a direct effect on the health status of the population. Research shows that job-loss is highly stressful, characterized as a form of bereavement. Stress affects physical health further down the line because of chronically increased levels of anxiety. According to Bartley, (1994) the unemployed tend to be heavier

smokers and drinkers. Validated in this study, (63,8%) of the smokers are unemployed and (59,4%) consume alcohol. More unemployed respondents have a higher diastolic pressure, (55,7%) and systolic pressure (57,9%) than the employed respondents namely diastolic (44,2%) and systolic (42,1%).

It has been identified that the association between the availability of money for food and the mass of the respondents is statistically significant (p=0,007) as determined with the chi-square statistical test.

Maslow in Kozier *et al.* (2000) describes five basic human needs, which an individual will strive to satisfy in a specific order, from the physiological level through to the level of actualisation. Man is never satisfied in striving to satisfy his needs, he may fluctuate between levels. The most basic level is about survival, no individual moves from this level if these needs are not met. Respondents have indicated that they stoop so low to meet these needs, sacrificing their morals and values in pursuing those activities required to support and feed their families. This is illustrated by the following examples: A respondent indicated that they are forced to steal for survival, *"... that is why the jails are so full of Coloureds",* another reported that he is forced to sell wine and beer to make a living, something he never thought of doing as it is against his principles. According to Landman, a South African philosopher, (1993) *"...the poorer one is, the more one's energies are consumed by the requirements of bare survival".*

Unemployment ultimately becomes a burden to the state as it creates a society riddled with crime and those social pathologies and squalor associated with crime. Poverty deepens within poverty.

> *"... No amount of juggling by government departments has managed to obscure the overriding correlation between poverty and ill health" (Editorial, Lancet, 1996). A high mortality and morbidity rate among the lower socio-economic people will continue to exist unless more aggressive and constructive measures are introduced.*

The following is recommended:

- **Introduction of a social grant or social coupons to the unemployed**.

This recommendation is of fundamental importance, the granting of social grants

needs to be explored to ensure that grants are used for basic commodities such as food. According to the Bill of Rights everyone has the right to have access to:

(1) sufficient food and water

(2) social security, including appropriate social assistance, if they are unable to support themselves and their dependants.

The introduction of such a grant will help to improve the health status of the unemployed; a possibility exists that crime may decrease as respondents indicated they are forced to steal in order to survive. Many would argue that the country will not be able to afford this, however, prevention is better than cure. The respondents are economically active people who must be healthy and energetic as they contribute to the economy of the country. Production decreases if employees have no energy to work. As shown above and in paragraph, 5.12. the health status of the unemployed is influenced because of the low income and in some cases no income (14,7%). Prioritising the needs of the country is essential. By creating a healthy society, a healthy economy will ensue.

- **Job Creation**

Job creation should be a priority of both the government and private sector. The majority of the population lives in poverty and social upliftment is essential. Urgent attention should be given to this matter to create social upliftment and in so doing improve the health status of individuals.

- **Comprehensive programmes in preventative and promotive health**

The introduction of comprehensive programmes in preventative and promotive health that target all developmental stages are essential. Specific long-term interventions will eliminate problems that influence the health status of the population. Specific programmes must not only aim at changing individual behaviours, but should also modify the social and physical environment including public policy in support of healthy lifestyles.

In addition, research by the various government departments and universities into the implementation of policies should be executed, in order to monitor the social changes that are being brought about and the effect these have on the

health status of the population.

6.2.2 The Lifestyle of Individuals

The lifestyle chosen by an individual includes patterns of eating, exercise, use of tobacco, drugs, alcohol and methods of stress management. Healthy lifestyle behaviours such as regular exercise and following a balanced diet could influence the health of an individual positively. However, unhealthy lifestyle behaviours, referred to as high-risk behaviours, such as smoking, the consumption of alcohol and drugs and lack of exercise may influence the individual's health negatively (Brunner and Suddarth, 1996; Kozier *et al.*, 1995; Uitenbroek et al., 1996). Overeating, the lack of exercise, obesity, and smoking, are closely related to the incidence of heart disease, arteriosclerosis, diabetes, atherosclerosis and hypertension (Brunner and Suddarth, 1996; Kozier *et al.*, 1995; Smeltzer and Bare, 2000).

The recommendations with reference to lifestyle will be described according to factors that influence the lifestyle of an individual namely:

6.2.2.1 Social Habits: Smoking, Consumption of alcohol and Illegal Drugs

(a) Smoking

It is gratifying to note that the Minister of Health, despite much opposition, is addressing the use of cigarettes. Regulations, as promulgated in terms of the Tobacco Products Control Amendment Act 1999 (Act No.12 of 1999) will soon be introduced, these include regulations with reference to the tar and nicotine yield of a cigarette, point of sale advertisement of tobacco products, sponsorship and smoking in public places (Government Gazette, 3 December 1999).

This study has shown that of the (N=353) respondents 64% had a history of smoking, however, 10,8% had stopped smoking, which is a positive trend. However, 53,3% are still smoking, which is more than half of the population. Similar results were obtained in a study conducted by Hirschowitz and de Castro (1998) who conducted a national survey of health inequalities in South Africa and

identified that 55% of the Coloured population smoke cigarettes, the highest of all the population groups. In this study it has been identified that:

- 57(32,8%) of all smokers who are unable to avoid smoking, have a high diastolic blood pressure (N=174)

Recommendations:

(i) Enforce Legislation

The health education policy with reference to smoking should be applied aggressively in order to reduce the rate of smoking. It will be of no value if legislation that has been introduced is not enforced.

(ii) The Empowerment of Children Through Health Education

According to JF Kennedy (1917-1963) ***"Children are the world's most valuable resource and its best hope for the future"*** The researcher believes that an awareness with regard to a healthy lifestyle should be introduced at kindergarten level. Children at this age should internalise the value of a healthy lifestyle and factors that contribute to such a lifestyle. During play children also pretend to be adults and tend to imitate adults and those activities associated with them such as "smoking" their sweet cigarettes. In this regard sweet factories should refrain from making sweets that are associated with high-risk behavioural practices.

(iii) Role of Educators

The educators should be role models to the young children. Health education should continue throughout the child's schooling career into adulthood. It should be associated not only with the health providers, but also with the educators who are in daily contact with the children of the country. The enthusiasm of the teachers in securing a healthy society will influence the children who are the future of this country, posively.

(iv) Involvement of Non-Governmental Organizations, Churches, Health Forums and Professional Societies

- The involvement of non-governmental organizations, churches, health forums communities and professional societies are of value in addressing and assisting with the needs of the communities.

- The researcher believes that the development of a disadvantaged nation should be the priority of every citizen who has already been empowered with the knowledge about factors influencing the health status of a population. The health hazards of smoking, the consumption of alcohol and drugs should be internalised by the children of the country.

(b) Alcohol consumption

The consumption of alcohol is also a concern. While much emphasis is being placed on the use of cigarettes and illegal drugs, alcohol also has harmful effects on the body. Abuse of alcohol has serious repercussions for a family, it eventually destroys the family unit far more than what a cigarette does. Furthermore, it leads to social conflict, physical assault and abuse. As described in paragraph, 5.4. alcohol consumed in excess is destructive to the body. It affects the liver, pancreas, stomach, and brain particularly (Brunner and Suddarith, 1996; Kozier *et al.*, 1995; 2000; Smeltzer and Bare 2000). High-risk behaviour of this nature influences the health status of an individual. As identified in this study, the majority of those who drink, 54.8% practise binge drinking. which has an immediate negative effect on the individual. The individual vomits, becomes dizzy, has impaired mental capabilities and a hangover. Alcohol consumed in this manner also has long-term effects on the body (http://www.worldonline.co.za, 2000).

The health status of an individual is affected by the consumption of alcohol as shown in the following statistical data:

- 39 (38,2%) have a high diastole of all alcohol consumers who are unable to avoid consuming alcohol (N=102)
- The association between the consumption of alcohol (wine) and health problems of respondents is statistically significant (p=0,059) as determined with the chi-square statistical test.

- The association between the consumption of beer and the mass of the respondents is statistically significant (p=0,01) as determined with chi-square statistical test.
- The association between the consumption of wine and the mass of the respondents is statistically significant (p=0,001) as determined with the chi-square statistical test.

An increase in mass increases the risk for cardiovascular disease as described in paragraph, 5.12.

Recommendations:

(i) Revise Current Legislation

Legislation referring to the use and advertising of alcohol should be revised. The consumption of alcohol receives favourable publicity on national television, in newspapers and magazines. It is always associated with those who are brave and powerful, giving the public a message that "it is okay" to use alcohol. Many of these advertisements offer acceptable challenges to society, inviting the viewer or reader to indulge in such use. The country should be cautious in setting double standards. Emphasis should be placed on preventing disease and promoting good health. Advertising of alcohol on national television, in films, newspapers and magazines should be restricted.

(ii) Re-evaluate Blood Alcohol Content

The "Arrive Alive – Don't Drink and Drive Campaign", run by the South African Department of Transport recommends a blood alcohol content (BAC) of not more than 0.08gm (0.8mg%) alcohol per 100ml of blood when driving (Department of Transport, 1998). However, 0.05mg% may already give an individual a "mellow buzz" and according to the literature 0.5mg% and higher may even cause death (http://www.worldonline.co.za, 2000) The blood content of alcohol and driving should be re-evaluated.

(iii) Introduction of Aggressive Programmes in Promotive and Preventative health

The Minister of Health should take cognisance that the safe consumption of alcohol, as is the case with many other behavioural health risks, influences the health status of the population. Aggressive programmes in promotive and preventative health should be introduced as a matter of urgency. These should deal with:

(1) the dangers of the consumption of alcohol
(2) alcoholism
(3) binge drinking
(4) acceptable number of drinks per day if the individual consumes alcohol
(5) how alcohol influences the health status of an individual

(c) Illegal Drug Use

In the study 31,2% of the respondents who were using drugs (including legal and illegal drugs) 12,7% were using marijuana and 7,3% mandrax. The researcher believes that this figure might have been higher had the study included persons of 21 years and younger. The respondents concerned expressed their anger about not having employment. They manage their stress levels by "drowning" their sorrows and try to forget their circumstances by using drugs, alcohol, and smoking.

Recommendations:

(i) Promotive and preventative health programmes

Introduce promotive and preventative health programmes, which address the short-term and long-term effects of the abuse of drugs on the body.

(ii) Continuous monitoring

Non-governmental organizations and government departments such as the health, social and police services should continue to monitor the use of drugs among all age groups. Intensive control and monitoring of the illegal drug trade

should continue.

(iii) Involvement of Non-Governmental Organizations, Churches, Health Forums and Communities in Preventing the Use of Drugs.

- The introduction of community social support structures.
- The participation of non-governmental organizations and health forums in presenting workshops, seminars and lectures in preventing the use of illegal drugs should be emphasised
- The involvement of churches with specific programmes targeting all age groups such as the children, youth, middle-aged and elderly persons
- Children at all levels of schooling should be involved in the fight against illegal drug abuse

6.2.2.2 Dietary Intake

Health education should emphasise the value of a balanced diet. Many individuals can afford to have a balanced daily diet, but they do not have this because of attitudinal problems as discussed in paragraph, 5.5. However, ignorance still exists about the composition and the importance of a healthy diet. Substantial scientific evidence has been obtained in this regard. This is validated by the following results:

- 51,5% almost always have a variety of foods each day, such as fruits and vegetables, whole grain breads, cereals, lean meats and dairy products
- 30,6% almost never limit the amount of fats, saturated fat and cholesterol
- 24,6% almost never avoid salt
- 37,3% almost never avoid sugar
- only 35,5% of the respondents are of normal weight, while 9,4% are underweight and 55,1% are overweight

However, while a knowledge deficit about dietary intake exists, the study shows that among the unemployed, 26,5% never have a variety of foods per day and 24% indicated sometimes. Of the unemployed who do not have any financial income, 14,7% were asked how they survive. Many indicated that they have to beg from others, some depend on families, one indicated that he sometimes has to steal to survive, pick up old fruit and vegetables thrown away by supermarkets

and others scratch in the dirt bins of the wealthier hoping to find something to eat. Among those who are fortunate to have employment 71,7% earn less than R3000 per month, analysed further 49,6% earn less than R1500 per month. This salary does not make it possible to meet the needs required for a healthy lifestyle. The reality is that poverty is rife in this country. As described in 5.5. many deficiency diseases may occur if a balanced daily diet is not followed.

Recommendations:

(i) Health Education

- The health educators, namely the doctors, nurses, and any related professionals, should place priority on health education. The research study has shown the researcher that the health professionals and related professionals should guard against self-evidence or that it is obvious that the patient / client does know the facts about a healthy balanced diet. In this study, it was identified that a lack of knowledge about a healthy diet exists among the respondents.

- Health education addressing healthy eating habits and the adverse effects of an inadequate diet should be emphasised at schools.

(ii) Social Support

- As described above, social grants should be introduced to provide for the basic needs of those who are unable to support themselves and their dependants.

- The private sector could be involved in the distribution of free food parcels to the needy.

6.2.2.3 Exercise, Stress Management and Leisure Time

(a) Exercise

Higher levels of education are associated with an increase in the number of respondents who exercise regularly. The importance and value of exercising are associated with persons of higher education levels and among the middle-upper socio-economic level. Clark et al. (1995) and Lynch et al. (1997) support the research findings of the study. In a study they identified that individuals of a lower socio-economic status are associated with higher rates of smoking, obesity and reluctance to exercise.

Among those who exercised, the study shows that (45,5%) were from the upper-middle socio-economic level, (36,8) from lower socio-economic level living in formal housing and (39,2%) from lower socio-economic level living in informal housing.

It is disheartening to note that only (23,2%) do vigorous exercises at least three times per week, while (70,0%) almost never exercise and (6,8%) will sometimes do vigorous exercise. The minimal value attached to exercising is seen in the number of respondents (72,3%) who indicated that they are just lazy to exercise, while 63,7% of those who do not exercise indicated that they do not have time. Despite this, the majority of the respondents indicated to the researcher that exercise is associated with good health. A possible lack of understanding exists about the relationship between exercise and good health.

The majority of South Africans who are disadvantaged are of a low socio-economic level and lack the development that the more advantaged groups acquired during the apartheid years.

The lack of exercise as described in paragraph, 5.6. may influence the health status of the individual and ultimately cause a cardiovascular disease. In this study it was identified that the lack of exercise is influencing the health status of the population. The following statistical data show:

- The association between exercise and the mass of the respondents is statistically significant (p=0,05) as determined with the chi-square statistical test.
- The association between doing vigorous exercise for 15 to 30 minutes at

least three times per week and the health problems of respondents is statistically significant (p=0,04) as determined with the chi-square statistical test.

Recommendations:

(i) Awareness Campaigns

- An awareness of the relationship between exercise and health should be internalised at school level, already in the primary schools the young pupils must realise that exercise is essential in order to be healthy. Emphasis should be placed on the value of exercising. Physical training should not just be seen as another subject / activity at school but its value should be explained.

- National television, newspapers, magazines and sporting events should be used in developing this awareness among people.

- Intense health education campaigns must be embarked on in order to bring about a paradigm shift among the majority of the people of this country and establish exercise as an essential for good health. Examples on how exercise promotes good health, both physically and psychologically, should be given, as many find it difficult to understand the relationship between good health and regular exercise.

- Exercise should not only be associated with gymnasiums that may become a financial burden. Guidelines with reference to exercise without any costs should be made available through communication mediums such as the news media, libraries, health clinics.

(b) Stress Management

Excess stress may cause problems such as cardiovascular disease, asthma, and gastro-intestinal problems (Smeltzer and Bare, 2000). The majority of the respondents (79,9%) have indicated that they suffer from stress. The major cause of their stress is financial problems, (65,2%), followed by being

unemployed (65%) and those being without income (67,3%). The turmoil of merely existing in today's society creates stress for many individuals and is further aggravated by factors as identified.

The respondents apply a variety of activities in order to manage their stress. However, not all these activities are healthy. Some of these activities include socializing (69,5%), many of these respondents indicated that it was a time to "party", 54,1% watching television and reading (64,9%).
It was further identified that of the unemployed, N= 201, 130(65,0%) of respondents were stressed and of those without any income N=52, 35(67,3%) were stressed. Excess stress may cause problems such as cardiovascular disease, asthma, and gastro-intestinal problems (Smeltzer and Bare, 2000).

17% of the respondents indicated that they do not have a support system, which assists them when stressed. Support is essential when someone is stressed as it assists and facilitates an individual's coping skills. An individual who receives emotional support from family and significant others, provides such an individual with love and a sense of sharing the burden (Smeltzer and Bare, 2000).

On the contrary, individuals with inadequate support networks sometimes allow themselves to become increasingly ill before they confirm their illness or seek medical attention. Those individuals with support also receive a stimulus to recover (Kozier *et al.*, 2000).

Recommendations

(i) Stress Management Programmes

- Stress management programmes which target specific groups, such as those from low socio-economic levels, should be introduced. Before such interventions are introduced, however, problems related to specific groups should be identified. Specific ways of dealing with stress should then be introduced within the framework of these groups.

- Healthy ways of managing stress should be promoted. The use of sedatives, eating, smoking, consuming alcohol and illegal drugs should be avoided. The study shows that 20,4% of respondents apply substance

abuse measures to manage stress.

(ii) Establishment of Specific Community Support Groups

The establishment of specific community support groups is recommended for the management of stress caused by specific problems:

- Appointment of marriage counsellors in the community
- Support groups for the rape and abused victims
- Support groups for the physically and mentally abused children and women
- Financial guidance should be available within communities
- Support with reference to legal matters should be available
- Support groups within the community to co-ordinate jobs leading to possible employment
- Support for those who are constantly exposed to crime
- The involvement of community student services of various universities.
- Involvement of the clergy and support groups in churches such as groups for the elderly, youth and families

(iii) Workshops, Seminars and Lectures

- Involve the communities in workshops, seminars, lectures in public places such as the libraries and church halls on a regular basis.

(iv) Involve The News Media

- The use of the news media, magazines, national television, radio talk shows are all sources that could be utilized to discuss the management of stress.

(c) Leisure Time

The majority of respondent's, 92,1% have leisure time. The researcher's concern is that the majority use their leisure time for passive activities. To illustrate this

(77,5%) socialize, (51,1%) watch television, (9,7%) sleep and others sit in the sun (3%). These passive activities contribute to an increase in body weight that may give rise to cardiovascular disease, and is not conducive to mental activity. (70%) of the respondents do not do any vigorous exercise, consequently, because of limited exercise and the passive behaviour (51,0%) are overweight. The study has identified that:

- The association between exercise and the mass of the respondents is statistically significant (p=0,05) as determined with the chi-square statistical test.
- The association between doing vigorous exercise for 15 to 30 minutes at least three times per week and the health problems of respondents is statistically significant (p=0,04) as determined with the chi-square statistical test.

Myers *et al.* (1995) found that exercise among African-Americans is also limited. The respondents show similar trends and are subsequently also at a high risk of developing cardiovascular diseases as described in paragraph 5.12.

Recommendations:

(i) Development Programmes Based on a Paradigm Shift

- According to the researcher, leisure time is essential for the management of stress, but free time does not mean sitting and doing nothing. The communities should be mobilized to become more active during these times. According to the researcher, the world in the 21st century is one in which time as a commodity is of the essence. The value and the ethics of time should be explored with those communities who are ignorant about it.

- Many communities who were disadvantaged and poorly developed, are faced with a paradigm shift, which involves becoming more active during free times. This will promote good health, physical and mental well-being culminating in a sense of achievement when time is used more constructively. Ultimately the vicious cycle as referred to in paragraph, 6.2.1. that self-perpetuates from one generation into the next, may be broken. Children observe and internalise the norms and values set within the home environment, such as watching their parents just "sitting around"

or watching television as a past time. The outcome will be that these children will also do this as adults. A resurgence, a reawakening must occur among communities and must impinge onto the next generation. This vicious cycle within families must be broken. A developing nation needs to understand and gain insight into the value of time and time management. Individuals should be shown the relationship between time management and a healthy lifestyle, subsequently improving the level of wellness of the individual. A healthy and energetic individual is closely linked to improved productivity. Consequently, this may improve the socio-economic level of the individual and contribute positively to the economy of the country.

(ii) Skills Development Programmes

- Programmes, workshops, seminars and lectures should be introduced to educate the previously disadvantaged communities who lack the knowledge about various activities that can be carried out during free time.

- The news media, radios, magazines, newspapers, communities, non-governmental organizations and churches are all sources of information that should be mobilized to take leading roles in teaching the previously disadvantaged communities. Teachings should include various leisure time activities and skills that can be applied during free time. Skills such as pottery, crocheting, sewing, knitting, weaving and painting may not only promote the well-being of an individual, but may also be applied to improve the financial circumstances of a family. The students of universities and colleges can utilize the opportunity to become involved in various community projects.

6.2.3 Ethno-Cultural Beliefs: Health and Illness

While genetic predispositions are passed on from generation to generation, so too are the patterns of living and lifestyles in a family. As illustrated by Kozier et al. (1995) a woman who was abused as a child may be inclined to abuse her child as well.

6.2.3.1 Understanding of Health

Respondents were asked to give their understanding of how they relate their culture to health. A significant number, 17% have no understanding about the concept "health". It is however, gratifying to note that the majority have an idea of what health is about. 39,4% refer to "...practising a healthy lifestyle..." the behaviours that need to be practised in order to enjoy good health. A significant number of respondents are practising healthy lifestyles while there is also a significant number of respondents that do not practice a healthy lifestyle.

The following indicators, consumption of alcohol, smoking and eating habits validate this, N=139:

- (69,1%) always avoid alcohol compared to (24,5%) who never avoid alcohol consumption, (6,5%) sometimes avoid it.
- (50,4%) always avoid smoking while (48,2%) never avoid smoking, (1,4%) sometimes avoid smoking.
- (53,2%) always have a variety of foods per day such as fruit, vegetables, whole grains bread, cereals, lean meats, dairy products while (17,3%) almost never, (29,5%) sometimes have a variety of foods per day.

The objective test measurements show the following:

- (23,7%) and (23%) have an increased diastolic and systolic pressure respectively
- cholesterol values show that (31,7%) are at moderate risk for cardiovascular disease, (2,2%) are at high risk and (1,4%) are at very high risk.
- (57,6%) and (7,9%) are overweight and underweight respectively
- (27,3%) were referred to a doctor for problems that were identified.
- (70,0%) of the total population, N=353 do not do vigorous exercises at least three times per week.

Recommendations:

Health education that addresses the following issues is urgently required within communities. It is imperative that every opportunity is utilized to dispense valuable information to communities with reference to the promotion of good health. Hundreds of patients are seen daily at day hospitals, hospitals and other

health institutions, these are valuable contact sessions with the public within which health education can be given. The study has shown that the role health professionals played with reference to health education was minimal. In addition to the recommendations as described in paragraph, 6.2.2. the following is further recommended:

(i) Participation of Non-Governmental Organizations, Churches, Colleges, Universities, Communities and Private Sector

- The participation of non-governmental organizations, churches, colleges, universities and communities should take the lead in organizing seminars, workshops and lectures
- Private companies and employers should be involved, as the development of the population will benefit not only the individual, but also the economy.
- Workshops, seminars and lectures for communities

The introduction of regular workshops, seminars, and lectures for communities that should address the **value of a healthy lifestyle** and factors that contribute to it:

- A healthy balanced diet within the financial framework of the low socio-economic population, who are also the majority in the country should be recommended. The health educators should work out diets that are not costly but that meet the nutritional requirements of a balanced diet. Refrain from telling the client / patient that it is essential that your meal must consist of cheese, 500ml of milk, meat, chicken and so forth. A breakdown of the cost should be done and replacements to supplement the requirements explored. The individual should be involved in the discussion and planning of their diets. In this way, the financial framework within which the planning could take place, will be identified.

- **The dangers of smoking, the use of excess alcohol and drugs**.

  Analyse the cost of cigarettes with the patient / client. Offer help on how to gradually decrease the habits of smoking, consuming alcohol and where applicable, the use of drugs. The outcome of behavioural modification may not only have positive implications for the individual's health, but also financial gain.

- **The value of exercising**.

  Ways of meeting this essential need should be explored with the patient/ client. The more middle-upper class individual probably sees exercise as an essential need for good health and can afford to join a gymnasium, however, the poor perceive joining a gymnasium as a luxury. An example of meeting this essential need among the poor is to form groups who do strenuous walking daily. This is the least expensive way of exercising. The researcher refers to the formation of groups, as the respondents have indicated that it is dangerous to walk alone because of the risk of being raped and criminally assaulted.

6.2.3.2 Ethno-Cultural Beliefs Related to Health

The ethno-cultural beliefs of the Coloured population were explored. A significant number of (52,7%) indicated that they had no such beliefs. However, (38%) indicated that "*it is a group of people who love to eat and to share with others*". Despite the fact that (38%) of the population have indicated, that they love to eat food, it is not the overwhelming majority. The majority have no cultural beliefs that they relate to health. Respondents of the more middle-upper class, and associated with higher levels of education, (61,8%) have no cultural beliefs, compared with that of the lower socio-economic levels with low educational levels (45,9%), formal housing, and (50,6%) informal housing. Fewer respondents of the middle-upper socio-economic level believe that the cultural belief means eating a lot of food and sharing with others than that of the low socio-economic levels.

It is therefore imperative to intensify the promotion of good health and the prevention of disease from a young age. Health education cannot be emphasised enough as obesity and incorrect eating habits are associated with poor health. The above results indicate that this population is already at risk to develop cardiovascular disease and diabetes mellitus.

The following statistics substantiate the cultural belief of those who indicated that the Coloured people relate eating a lot of food and sharing with others as characteristic of the population group (N=139)

- 51,5% of the respondents almost always have a variety of foods each day,

such as fruits and vegetables, whole grain breads, cereals, lean meats and dairy products.

- 30,6% almost never limit the amount of fats, saturated fat and cholesterol
- 38,8% respondents have an increased diastolic pressure
- 30,6% respondents have an increased systolic pressures
- cholesterol levels: 32,1% are a moderate risk for cardiovascular disease: 3,7% high risk, and 1,5% very high
- the majority of respondents, 55,1% are overweight.

From the analysis, it shows some of the data that can be related to those respondents who like eating a lot of food (N=139). There is a relationship between the eating habits of these respondents and subsequently their health status has been influenced.

Recommendations:

The recommendations as described in paragraphs, 6.2.2.2. and 6.2.3.1. also apply to this section.

6.2.3.3 Understanding of illness

The respondents were asked how they related their cultural beliefs to illness. A variety of interpretations have been obtained and categorized into common themes. 19,3% indicated that they *"... have no idea"*, while the majority 59,5% indicated, *"... Don't feel well, have headaches, a cough"*. According to DeLaune and Ladner (1998) illness *"... means different things to different people"*. It is also the finding of this study. There was nothing significant that could be related to the health status of respondents such as extreme ideas that may influence the individual's health negatively.

6.2.3.4 Ethno-Cultural Beliefs Related to Illness

There is no significant data of cultural beliefs about illness.

6.2.3.5 Ethno-Cultural Beliefs and Self-Medication

A significant number of respondents (85,8%), have indicated that their belief is to first self-medicate any illness before they see a doctor. The majority of respondents have responded to a variety of treatment measures. The majority (88,4%) use off the self-medication closely followed by home remedies such as herbs, (79,9%), and folklore medicine (51,5 %). The researcher believes that the above practices are possibly not purely folklore cultural beliefs, judging from the high percentage of respondents who use off-the shelf medication. Many respondents are forced to seek measures of treatment other than the traditional measure of consulting a doctor because the cost of medical services is extremely high. This problem is further exacerbated by the inaccessibility of health services to many, as discussed in paragraph 1.10.

While self-treatment is acceptable to many, the user should guard against delayed health seeking behaviour. Currently, the users share information and therapy among each other. The researcher has observed in the field that what is good for one person may also become a "*good*" for the next person. In many cases this may be contra-indicated for the next person, but ignorance exists about it.

The various folklore therapies and herbal uses are not scientifically proven. A need exists for scientific investigation into the various folklore practices, use of home remedies such as herbs and off-the shelf medication.

Recommendations:

(i) Scientific Research

Scientific investigation into the various folklore practices, home remedies such as herbs and off-the shelf medication, to verify their use and safety is required

(ii) Introduction of guidelines with reference to common minor conditions and the management of these conditions

Guidelines have become essential for a safer practice and healthier community.

The prevention of delayed health-seeking behaviour can save the state thousands of rands per patient should these guidelines be introduced to the population. The prerequisite for the use of these guidelines is that they should be simplified, written in the language that the communities understand, and illustrated with pictures as a large section of the population is of a lower socio-economic level with low levels of education.

These guidelines should include:

- well-defined common minor conditions
- recommended herb or medication
- indications for use
- contra-indications
- side-effects
- when to consult with a doctor
- guidelines should be made available at strategic service points such as the day hospitals, clinics, pharmacies and doctors' rooms, for those who apply these beliefs.

6.2.4 Religion

6.2.4.1 Religion and Health

The majority of the respondents are religious and relate health to religion. (81,9%) believe that the *"...body is the temple of God, a gift from God, you must look after it, and believe. You must pray for your health".* On the contrary, a significant number, (18,1%) believe there is no relationship. However, the following statistics show that many who believe the body is *"the temple of God, a gift from God, and that the body must be looked after"* do practise what they believe.

The following statistical data substantiates these beliefs:

- 49,5% respondents almost always avoid smoking, 0,6% sometimes smoke
- 66,8% almost always avoid drinking alcohol
- 57,4% almost always eat a variety of foods per day

However, the financial income and stress levels of an individual also influence

the individual's lifestyle. The following data show that:

- 59,5% are unemployed
- 15,9% have no financial income
- 70,9% earn R3000 and less per month
- 81,7% suffer from stress

The results obtained in the study about religion and health reflect well on the country. The researcher believes that the various churches can be actively involved in teaching their members about the factors that influence the lifestyle of the individual. A church initiated the project involving farm workers as described in paragraph 1.1.

Church congregations consist of a variety of people ranging between upper, middle, and lower socio-economic levels as well as of all educational levels. Professional people including nurses, doctors, social workers belonging to a church could contribute meaningfully to community development within the framework of the church.

The researcher reiterates that every possible means must be utilized to promote good health and to prevent disease.

6.2.4.2 Religion and Illness

Respondents indicated that a significant number of respondents (42,5%) indicated that there is no relationship between illness and religion; illness is brought about through high-risk behaviours. Despite the fact that (81.9%) believe that there is a relationship between religion and health as discussed above, fewer respondents, (57,5%) believe that there is a relationship between religion and illness. Only (13,6%) of the respondents indicated that they needed to consult with the priest/minister before receiving any treatment. Many indicated that their religion teaches them to use the doctors as required, as they are sent by God to help them.

In conclusion, according to the Bill of Rights everyone has the right to practise his or her religious beliefs (The Constitution of the Republic of South Africa, Act 108 of 1996). It is therefore essential that the nurses and doctors together with related health professionals take cognisance of the patient's religious beliefs

when patients are assessed and treatment measures are introduced.

6.2.4.3 Environment

An individual's physical environment, which includes housing and sanitation facilities, may affect the health of an individual. Air, food, and water pollutants are often directly or indirectly related to various types of disease (Kozier *et al.,* 1995).

The majority of respondents, (82,4%) have indicated that they have environmental problems influencing their health, (78,9%) males, and (85,3%) females. (72,4%), respondents with environmental problems are from the upper-middle socio-economic level, (86,5%) from the lower socio-economic (formal housing) and (90,7%) from informal housing sector. Minimal differences were observed between the middle-upper socio-economic level and that of lower socio-economical levels.

It is shocking to note that (79.5%) of respondents indicated that crime is a problem to them. Respondents explained that it is sometimes a risk to stand in the front of their homes, as they fear that a stray gunshot bullet may hit them, many fear that they would be sexually assaulted if they go out onto the roads and feared the gangsters who at times demand "*protection money*".

A significant number of respondents (66,7%) indicated that noise, and air pollution, are problematic. Shebeens and local "discos" are among the most common causes of noise in the lower socio-economic areas.

The control of tuberculosis is a worldwide problem but more so in the Western Cape. Many patients complained that the tuberculosis patients were purposefully defaulting their treatment because they wanted to continue with the state grant. It was also established that the state grant these patients received, was used predominantly to buy alcohol and cigarettes. Patients lacked health education about the importance of containing the disease and being cured, as well as the implications of defaulting and the importance of controlling their spitting. This is seen as an environmental problem, respondents indicated that these patients spit all over and that they are scared that they will also get tuberculosis. This constitutes a serious threat to other people's health.

Poor environmental factors that promote the outbreak of disease included:

- Respondents squatting in order to dispose of human excreta.
- It was established that owners of shacks had to dig a big hole and transform it into a toilet. If this was not done, it would result in no toilet facilities for such a family, the alternative will be to squat in the bushes.
- Overcrowded environments
- Dirt dumps and standing water
- Dead dogs were found lying around
- Sick dogs were found wandering around

Further observations of which the town planners are unaware, are that informal housing exist in the back yards of the low socio-economic formal houses. In a particular back yard, approximately six shacks were erected. One outside toilet and no bathroom had to serve seven family units. The immediate environment of these premises was one of overcrowding and unhygienic facilities.

The researcher further observed the dirty environments where dirt dumps and standing water were seen everywhere, on open fields, in the roads and on pavements. In a discussion with a municipal town planner, he expressed concern at the unacceptable dirty environments but also added *"...the people are so used to it, they do not notice it".*

Newly-built houses, which are part of the redevelopment, policy, were poorly constructed. Ventilation was poor, consisting of one window, the walls were wet, and roofs had no ceiling with drops of water falling from them.

Recommendations.

In the light of this situation the researcher makes the following recommendations:

6.2.4.4 Community Involvement

Despite the disparities of the past, the communities, schools, non-governmental organizations, and churches should be involved and mobilized in creating safe and hygienic environments. The communities should be educated about the evils of unsafe environments and dirt dumps that are sometimes wilfully created. The

country is in the process of building a new nation, patriotism should be internalised. The citizens should take on ownership of their country and even if it means making a small contribution, try and build a healthy nation.

6.2.4.5 Prioritising Functions of Local Governments

Local governments and municipalities, together with the town planners, health inspectors, and all those connected with serving the local communities should service the people with dignity and with pride. Respondents indicated that they are ridiculed, belittled when complaints are made to the service providers about the dirty environments.

According to the Bill of Rights, **"Everyone has inherent dignity and the right to have their dignity respected and protected"** (The Constitution of the Republic of South Africa, Act 108 of 1996). The study has established that the majority of the respondents were of a low socio-economic level. In addition, it was determined that they are susceptible to disease because their diets were inadequate, resulting in a low resistance. These respondents could least afford to get sick, as medical costs were too high. Therefore, the authorities concerned should prevent disease and promote health as their first priority.

(i) Create A User-friendly Municipality

- Create "winning" municipalities by treating the communities with respect and dignity, make them feel special. This may create a mutual respect. Communities should be served with a smile even though it appears that a losing battle is being fought, a difference will be made, the communities are the clients. Measures that will create a feeling of ownership and pride among township dwellers should be introduced.

(ii) Prevention of Disease and the Promotion of Health

- Prevention of disease and the promotion of health by creating safe and hygienic environments is a priority
- Involve schools, non-governmental organizations, private sector and

churches to participate in cleaning-up campaigns

- Involve and consult with communities about their expectations of their townships or suburbs
- Mobilize communities to take responsibility for their township or suburb.
- Introduce competitions within suburbs and between suburbs. Focus should be on the environment, for example, the most beautiful garden, best kept environment, etcetera.
- Provide dirt bins to households to prevent stray dogs from tearing plastic bags and distributing the dirt all over. Prompt removal of dirt is essential.
- Strict control over stray animals. Dogs should be picked up if just wandering around, especially if infested with disease.
- Implement strict measures of control with reference to dumping dirt. These measures should be evaluated regularly.

The local government must take cognisance of the Bill of Rights, clause 24 **"Everyone has the right to an environment that is not harmful to their health or well-being".** (The Constitution of the Republic of South Africa, Act 108 of 1996). The majority of the Coloured people are concentrated in the townships where an outbreak of disease can have an effect on many persons. The prevention of disease and promotion of health is a priority. Unhygienic environments should receive the most urgent attention.

6.2.4.6 Construction of Houses

The houses that are constructed as part of the redevelopment programme warrant much concern, as described in paragraphs, 5.9 and 5.10. According to the constitution, **everyone has the right to adequate housing** (The Constitution of the Republic of South Africa, Act 108 of 1996).

The houses that are built as part of the redevelopment plan (RDP) are of inferior quality. According to the Housing Consumers Act, No. 95 of 1998 all houses to be built must be enrolled with the National Home Builders Registration Council (NHBRC) and meet the specifications as stipulated in the CMA Manual, fifth edition, 1994.

- All builders must be registered with the NHBRC.
  All builders must build houses according to the CMA Manual fifth edition, 1994.

- It was identified that the RDP houses, which formed part of a government project, were not enrolled with the National Home Builders Registration Council (NHBRC). However, according to a senior building inspector, despite the fact that these houses were not enrolled with the council, the builder who is a registered member of the council has an obligation to build in accordance with the homebuilder's manual. Specifications were not adhered to as legislated.

Recommendations:

Because construction of a house may influence the health status of individuals, the following is recommended:

(i) Apply Legislation

- According to Act No. 95 of 1998, Housing Consumers Protection Measures Act all houses that are built must be in accordance with the specifications of the CMA Manual, fifth edition, 1994. This act must apply to all houses including government projects.
- All builders must be registered with the National Home Builders Registration Council.
- All houses, including government projects such as the RDP houses, should meet the specifications of the home builders manual to prevent inferior building

(ii) Build Quality Houses.

(a) Take precautions to prevent dampness
(b) Ensure adequate ventilation:
(c) Employ qualified artisans

The researcher concludes that it is more cost effective to build a hundred quality houses than providing a thousand poorly built houses of inferior quality, as described in paragraph 5.9. as this may create a thousand health problems. Studies have shown that there is a close statistical association between housing tenure and health. Research shows that owner-occupiers are likely to have the

lowest death rates, and council tenants the highest death rates (Blackburn, 1992).

6.2.4.7 Crime Control

Intense monitoring of crime is a problem, which is already being addressed. Dealing with crime should be a chief priority in the country as it is influencing the health status of the population as indicated previously.

This is part of the social pathology existing within communities as many have to struggle to survive, consequently there are persons who will commit crime to survive. It is a national priority of the government to address the social problems within communities in order to decrease the crime rate.

6.2.4.8 Pollution

Respondents have indicated that noise and air pollution are hazards to their health. The researcher spent a number of days in a particular suburb and experienced the strong chemical fumes emanating from a nearby factory. This may contribute to respiratory diseases. Monitoring air pollution and enforcing the law is of utmost importance to health as hazardous pollutants affect the people.

In terms of the constitution, everyone has the right to have the environment protected, for the benefit of present and future generations and to prevent pollution and ecological degradation (The Constitution of the Republic of South Africa, Act 108 of 1996).

Noise pollution is caused by shebeens and discos. The communities have a right to living peacefully and the law should prevail in areas where people's rights are contravened.

Recommendations:

- The researcher recommends that the police also monitor the environments for noise and make people aware that they are infringing on others' rights to peace and quiet when noise disturbs them.
- The establishment of community forums to deal with environmental issues

- The introduction of development programmes by community support groups, non-governmental organizations, churches and schools. These groups should address issues that influence their environment such as noise pollution from discos and shebeens

6.2.4.9 Monitoring of Informal Settlements and Informal Housing

It is imperative that informal settlements are monitored so as to provide the required water supply and sanitation services. It is a right that the citizens of the country are provided with safe water (The Constitution of the Republic of South Africa, Act 108 of 1996).

Recommendations:

- In order to promote good health and prevent disease, overcrowding of houses should be prevented. Health inspectors should monitor environments and backyards of the lower socio-economic houses to prevent overpopulation of the premises, as inadequate sanitation facilities and water supplies exist in such circumstances. Overcrowding and the wet conditions of the Western Cape are ideal for the spread of tuberculosis, against which a battle is being fought with very little success, as the causes are not being addressed.

6.2.5 Health Services

6.2.5.1 Accessibility and Affordability of Services

According to the Bill of Rights, everyone has the right to health care services and no-one may be refused emergency medical treatment. (The Constitution of the Republic of South Africa, Act 108 of 1996). While the Bill of Rights makes provision that everyone has a right to health services, the affordability and accessibility to these services are posing major challenges to the policy makers in health care.

Only (20,7%) of the respondents in this research study belong to medical aid schemes. Medical aid insurance is costly and is financially out of the reach of many. Currently the majority of the respondents (71,7%) earn less than R3000 per month, analysed further, (49,6%) are earning less than R1500 per month. Medical aid insurance which includes dependants can amount to more than R2000 per month. Low salaries therefore do not make it possible to meet these medical costs. Consequently, the respondents are forced to use the free service offered at day hospitals. Currently more respondents are using the state services than the private sector. As described in paragraph, 5.10 the majority of the respondents use the day hospitals.

6.2.5.2 Accessibility to Health Services

Only (57,5%) find the health services accessible, while a significant number, (42,5%) do not find the health services accessible, these include the private and public services. According to the researcher, the results are significant as inaccessibility of health services may lead to delayed health-seeking behaviour and may consequently cost the state thousands of rands to assist an individual medically. As described in paragraph 5.10 there are many reasons why the health service is inaccessible. In order to improve the services and make them more accessible to the public, the following recommendations are therefore made:

Recommendations:

(i) Developing Populations to be Self-Responsible for Their Health

The development of people is not only about free health care services to the poorly developed communities. The researcher believes that it is essential for an individual to develop a sense of responsibility towards his or her own health in order to create a healthy nation. *"Ask not what your country can do for you – ask what you can do for your country"* (JF Kennedy, 1917-1963).

The emphasis in primary health care is to prevent disease and to promote good health. Monies should be invested into the development of people in order to educate them to take on responsibility for their own health. According to the health

policy framework adopted for the Southern African Developing Community, (1998) "Health for All by 2020" a target set by the World Health Organization, it can be achieved through the joint responsibility of the individuals, households, communities and governments. Despite the poverty that exists in the country, many diseases and bodily ailments are caused through the negligence of the individual. (42,5%) of the respondents indicated that " illness is your own negligence, brought about by high-risk behaviours such as smoking, consuming alcohol". A significant number of respondents, (39,4%) refer to health as *"...practising a healthy lifestyle".*

Many complex health issues face the health policy makers in the twenty-first century. Intensive and firm measures need to be investigated to try and make a difference. The input from the individual is of fundamental importance in improving the health status of the country. The researcher believes that with responsibility comes accountability. Alcohol consumers and smokers are currently paying high taxes on the purchase of cigarettes and alcohol. These taxation measures have not deterred the users from purchasing these commodities. High-risk behavioural practises continue to exist despite these measures. However, it has now become essential that measures that are more contentious be applied to prevent disease and promote health. Currently financial budget constraints have limited the use of dialysis for patients with renal failure, advanced cardiac surgery such as heart transplants and neonatal care for premature babies. These measures were introduced because of financial constraints, despite the ethical implications thereof. The researcher recommends that the department of health introduces an ethical committee to investigate measures whereby high-risk behaviour such as the consumption of alcohol is penalized. The principles of the primary health care policy should be introduced and implemented by medical aid schemes. Medical aid insurances should reciprocate and develop a point system for those who place value on their health, such as having a regular screening test for cancer of the cervix, annual monitoring of blood cholesterol levels and visits to the dentist. A certain amount of points should then qualify the member for a special bonus such as a reduction in fees.

To conclude this discussion, development is a slow process, but it can be achieved. Therefore, despite the current problems being experienced in the country, developing the people to become self-responsible and accountable for their health will make a difference in the health status of the population. Possibly then will the goal "Health for All by 2020" a target set by the World Health

Organization be reached.

(ii) Review of the Free Health Care Policy

- A review of the free medical service is recommended. The time has come for individuals to pay for the services provided. A small payment will promote a sense of responsibility. Free medical service should be reserved for the senior citizens, the severely disabled and the children of the country.

- The effect of the outcome of all strategies that are implemented should be researched and continuously evaluated. After six years of free health care, the Department of Health should contemplate and evaluate if a difference has been made in the health of the people exposed to free medical service. The Minister of Finance announced an amount of R 680 million for free health care in the 1997-98 national budget as part of the redevelopment policy. This amount is not adequate for the increasing number of people who now go to day hospitals or comprehensive health clinics for treatment. In the process of being on the receiving end, the communities are slowly developing a sense of dependency, and in so doing, create expectations that the government will be responsible for their health needs instead of assuming responsibility and accountability for their health.

The researcher reiterates that with responsibility comes accountability. The inhabitants must become aware of how to sustain their health and to prevent disease.

(iii) Improvement of the Health Services at Day Hospitals

Day hospitals or comprehensive health centres are currently required to serve the majority of the communities. The study has shown that (56,7%) of the respondents use day hospitals because (79,3%) of the them have no medical aid. Therefore, the number of patients reporting to day hospitals will be increasing rather than decreasing, if the economy does not improve and if more jobs are not created for the people. Currently a significant number of

respondents, (66,4%) have indicated that the services are poor, aggravated by long waiting times as indicated by (52,7%) and a further (11,3%) indicated that unhygienic conditions prevailed, not only at day hospitals, but also in all state services.

Daily a mammoth task confronts the nurses, when faced with so many patients with a variety of problems. When faced with such a task every day the situation affects the nurses physically and mentally. Consequently, nurses become demoralized, frustrated and signs of burnout set in. It is then unfortunate that the patients who attend these facilities bear the brunt of the frustration of the nurses who attend to them. A significant number of respondents, (29,3%) complained about the attitude of nurses, who made patients feel that they were doing them a favour because of the free medical care. In addition, (17,3%) of respondents indicated that the day hospitals are overcrowded because there is a staff shortage. This explains the complaints of patients about the nurses who have negative attitudes towards them as described in paragraph 5.10.

Functioning in such circumstances is not conducive for quality health care delivery and health education. The staff rushes to get through the large number of patients. All these factors create a vicious cycle for the health policy makers. A primary health care policy is in place, but the services are dominated by curative functions. Patients are treated for problems and complications of problems, but are not given the required health education to prevent disease and how to promote good health. Currently, the prevention of disease and the promotion of good health is not a priority as all the energies of the health providers are absorbed in the masses of work that they are faced with daily.

Recommendations:

The researcher proposes:

(a) Personnel

- That urgent work-studies should be undertaken at the day hospitals.
- That the nursing, medical, and pharmaceutical staff complement receive urgent attention and be increased as required to meet the needs of the population.

- Involve the staff when strategising
- Reorienting the health care providers to adopt health promotion as an integral part of their practice. Every contact with a patient/client should be valued and health education given.

(b) Organization

- That a 24-hour service already existing at some day hospitals be extended to all day hospitals, alternatively that hours be extended. Patients should be allowed to attend a day hospital after hours. Providing an adequate service to the people, will allow the patient to be at work during the day and subsequently not lose a day's salary / wage.
- The number of patients that crowd a day hospital from as early as 06h00 should be staggered. For example patients should be allowed to go to work and then attend a day hospital after hours.
- The introduction of specific clinics such as hypertension or diabetic should be scheduled for mornings or afternoons on certain days. These sessions may also be used to address the groups of patients on specific health talks or show videos of common health to all the problems waiting patients.
- Available service for patients who have no appointments should be introduced. It is unethical to turn patients away. Where must they go?
- That services should be available in all suburbs; the study has shown that in one particular suburb there was no day hospital. According to the health care policy, health care services should be available in all communities (Department of Health, 1995).
- Introduction of mobile clinics into informal settlements to meet the high demand for services

(c) Service Fees

- The introduction of a minimal fee for services rendered is proposed. These funds can contribute to the improvement of health services in the country.

(d) The Environment

- That the hygiene of the institution and especially the public toilets be monitored. Staff should be appointed especially for this task as public toilets are constantly in use. An hourly roster system should be introduced for the cleaning of toilets.

The researcher concludes this discussion with the reminder that every citizen has a right to have access to health care services (Constitution of South Africa, Act 108 of 1996). This discussion has shown how accessibility can be a hindrance in health care. Accessibility is not only the distance an individual must travel to get to the health service point but more so the utilization of these services. Services should be user friendly to the consumer.

6.3 CONCLUSION

An in-depth study was undertaken to determine the factors influencing the health status of the Coloured people of the Western Cape in an urban setting. Specific goals were set for the study and hypotheses for testing. These goals were achieved and the hypotheses that were set were tested and accepted.

This study has shown that there are various modifiable factors influencing the population's health status. The lack in health education was identified in all the variables addressed and among all respondents of various socio-economic levels, including the educational levels. The importance of health is observed when a person's behaviour shows that health is perceived as something valuable by having regular dental checkups, participating in screening tests such as screening for cancer of the breasts, cervix, testes and for cardiovascular disorders. Therefore, the value of health must be emphasised and realised within individuals through health education. Health promotion should support personal and social development by providing information and education for health and enhancing life skills.

The Minister of Health is aware of the cultural diversity of the nation. The various ethnic groups have their own characteristics, identities and behavioural traits that reflect on the health status of the population.

Research indicates that behavioural, sociocultural, and environmental factors contribute significantly to each of the causes of excess morbidity and mortality in ethnic minorities. It is a known fact that behavioural factors such as dietary patterns, smoking and alcohol consumption, high-risk sexual behaviours, and aggressive behaviours are directly linked to causes of death in both minority and majority populations (Anderson, 1995). South Africa has a heterogeneous population with diverse cultural entities. The cultural diversity reflects a wide variation in lifestyle (such as smoking, consumption of alcohol and dietary intake), health behaviour, religion, and language. This influences the individual's perception of health problems and ill health that is constructed within the framework of Western medicine and health care system.

Irrevocably, as the late President JF Kennedy (1917-1963) said ***"I believe in human dignity as the source of national purpose, human liberty as the source of national action, the human heart as the source of national compassion, and in the human mind as the source of our invention and our ideas".*** It is believed that the completion of this study might reflect similarities in other ethnic groups. This will empower policy makers in health care to develop a more systematic and appropriate approach in the planning of health care.

Consequently, the restructuring of the health services for maximum use by the people will be made possible. The provision of better medical care and making that care more accessible to the people who need it, will be realised. The needs of the people will be addressed more appropriately. Through appropriate health education programmes the people will be empowered to take on responsibility for their own health. This will not only affect the people, but will influence the economy positively. Finances will be channelled appropriately resulting in a cost-effective service. Furthermore, it will empower the community nurse, who is the first contact person in health care to diagnose, manage and rehabilitate patients more appropriately within the framework of available resources with specific reference to cultural diversity, socio-economic and educational levels.

BIBLIOGRAPHY

American Dreams Collection. (2000) The Wisdom Of John F Kennedy. Historical Quotations.. The Web's Resource On The American Dream.

American Diabetes Association (1998) *Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus.* **Diabetes Care**, 21(Suppl.1),S5-S19.

Anderson, N.B. (1995) *Behavioral and Sociocultural Perspectives on Ethnicity and Health: Introduction to the Special Issue.* **Health Psychology,** 14 (7):589-91.

Anspaugh, D.J. (1994) **Wellness: concepts and applications.** Second Edition. St. Louis: Mosby.

Bagley, S.P. *et al.* (1995) *Panel V: Adaptive Health Behaviors Among Ethnic Minorities.* **Health Psychology, 14**(7):632-40.

Bartley, M. (1994) *Unemployment and ill health: understanding the relationship.* **Journal of Epidemiology and Community Health, 48**:333-37.

Becker, M.H. editor. (1974) **The Health Belief Model and Personal Health Behaviour.** Thorofare, New Jersey : Charles B Slack.

Bekker, F.J. *et al.*(1996) *Basic Cultural Values and Differences in Attitudes towards Health, Illness and Treatment Preferences within a Psychosomatic Frame of Reference.* **Psychother Psychosom, 65**:91-98.

Bhopal, R.S. (1995) *Ethnicity, race, health, and research: black box junk, or enlightened epidemiology?* **Journal of Epidemiology and Community Health, 49**:534-54.

Blackburn, C. (1992) **Poverty and health: working with families**. Milton Keynes. Buckinghamshire : Open University Press.

Blaxter, M. (1997) *Whose Fault is it? People's Own Conceptions of the Reasons for Health Inequalities.* **Social Science Medicine, 44**(6):747-56.

Boehringer-Mannheim (1999) **Feel better - Live Longer. Guide for all individuals particularly those with a tendency toward high blood fat levels**.

Boyle, J.S. and Andrews, M.M. (1989) **Transcultural Concepts in Nursing Care.** Boston : Little Brown College Division Scott, Foresman and Company.

Brown P (Editor) (c1989) **Perspectives in Medical Sociology**. Belmont, California : Wadsworth.

Brunner, L.S.& Suddarth, D.S. (1992) **The Textbook Adult Nursing.** London : Chapman & Hall.

Burns, N. and Grove, S.K. (1993) **The Practice Of Nursing Research. Conduct, Critique & Utilization.** Second Edition. Philadelphia, Pennsylvania : WB Saunders Company.

Clark, D.O. *et al. (*1995*) Socioeconomic Status and Exercise Self-Efficacy in Late life.* **Journal of Behavioral Medicine.,18**(4)March 17:356-76,

Clifford, C. (1997) **Nursing and Health Care Research.** Second Edition. London : Publishers Prentice Hall.

Cockerham, W.C. (1982) **Medical Sociology.** Engelwood Cliffs, NJ. : Prentice Hall.

Constitutional Assembly. (1996) *Act 108 of 1996, The Constitution of the Republic of South Africa.* Typeface Media.

Delaune, S.C. and Ladner P.K. (1998) **Fundamentals Of Nursing. Standards & Practice.** New York : Delmar Publishers.

De Villiers MR et al. 1999. Assessing the Health Needs of a Community through Participatory Research. **SA Family Practice** 21(1)8-12.

De Villiers, P.J.T. in Van Niekerk A. (editor) (1993) **Appropriate Health Care as a human right: a medical perspective.** Unit For Bioethics, University Of Stellenbosch.

Department of Finance. National Budget 1997-1998. http://www.finance.gov.za/archive/ s00000.htm.

Department of Health. (1998) **South Africa Demographic And Health Survey.** Preliminary Report. Medical Research Council.

Department of Health. (1995) **Towards a National Health System**. November 1995.

Dickoff, J. *et al.* (1968) *Theory in a Practice Discipline Part 1. Practice Oriented Theory.* **Nursing Research, 17**(5),September- October:445-435.

Dolan, J.A. *et al.* (1983) **Nursing In Society. A Historical Perspective.** Fifteenth Edition. London : WB Saunders Company

Duncan, H.A. (1994) **Blackwell's Dictionary of Nursing.** London : Blackwell Scientific Publications.

Editorial. *Is health a moral responsibility?* (1996) **The Lancet, 347**(9010)May:1197.

Epidemiological Comments (1997) **Department of Health, Republic of South Africa**, 23(3) December .

George, J.B. (Editor) (1990) **Nursing Theories. The Base for Professional Nursing Practice.** Third Edition. California : Prentice-Hall International Inc.

Gulliford, M.C. (1995) *et al. Social inequalities in health status and care practices among patients with diabetes mellitus in Trinidad and Tobago.* **Journal of Epidemiology and Community Health, 49**:534-54.

Hart, C. *et al.(1995) Social mobility, health, and cardiovascular mortality.* **Journal of Epidemiology and Community Health, 49**:534-54.

Heintz, J and Jardine C. 2000. *Socio-Economic Rights.* Worldonline Centreframe. http://www.worldonline.co.za/

Hennekens, C.H. (1987) Epidemiology in Medicine. First Edition. Boston, Little, Brown and Company .

Hirschowitz, R. and de Castro, J. (1998) *A National Household Survey of Health Inequalities in South Africa.* Case Survey for Kaiser Family Foundation. Internet, August.

Hoeman, S.P. *et al.*(1996) *Health Beliefs and Early Detection Among Chinese Women.* **Western Journal of Nursing Research, 18**(5):518-33.

Holloway, I. and Wheeler. S. (1997) **Basic concepts of qualitative research**. Oxford: Blackwell Scientific.

Igun, U.A. (1997) *Stages In Health-Seeking: A Descriptive Model.* **Social Science Medicine, 13A**:445-56.

Jaco, E.G.(1979) **Patients, physicians, and illness: a source book in behavioral science and health.** Ed. Jaco EG. Third Edition. New York : Free Press.

JNC VI (1997) *Report of the Sixth Joint National Committee on Prevention, Detection, Evaluation and Treatment of high Blood Pressure.* **Archives of Internal Medicine, 157: 2413-2446.**

Jones, K. (1991) **Sociology of Health Illness.** Cape Town: Juta & Co. Ltd.

Joung, I.M.A. *et al.* (1995) *Health behaviours explain part of the differences in self reported health associated with partner / marital status in the Netherlands.* **Journal of Epidemiology and Community Health, 49**:482-488.

Kalekin-Fishman, D. (1996) *The Impact Of Globalization On The determination And Management Of Ethical Choices In The Health Arena.* **Social Science Medicine, 43**(5):809-22.

Khan, J.E. (Editor) (1985) **The Right Word at the Right Time.** New York : Reader's Digest Association Inc.

Kidson, C. (1994) *Equity Poverty and the Economics of Health Care Consumption.* **Southeast Asian Journal Tropical Medicine Public Health.** 25(4)December:615-16.

Klopper, J.M. and Taylor SP (1987) *The health and wealth of South Africa.* **South African Medical Journal,** 72:799-801.

Kotzenberg, C. C. (1997) Confronting Chronic Conditions. **Epidemiological Comments, Department of Health, South Africa** 23 (3) December.

Koopmans, L.H. (1981) **An Introduction To Contemporary Statistics.** Boston: Duxbury Press.

Kozier, B. *et al.* (1991) **Fundamentals of Nursing. Concepts Process and Practice.Fourth Edition.** California : Addison & Wesley School Division, Benjamin / Cummings Publishing Company.

Kozier, B. *et al.* (1995**) Fundamentals of Nursing. Concepts Process and Practice.** Fifth Edition. California: Addison & Wesley School Division, Benjamin / Cummings Publishing Company.

Kozier, B. *et al.* (2000) **Fundamentals of Nursing. Concepts Process and Practice.** Sixth Edition. California: Addison & Wesley School Division, Benjamin / Cummings Publishing Company.

Krejcie, R.V. and D.W. Morgan (1970) *Determining Sample Size for Research Activities.* **Educational and Psychological Measurements, 30**(Autumn):608.

Kumanyika, S.K. (1993) *Special issues regarding obesity in minority populations.* **Annals of International Medicine, 119**:650-654.

Lahelma, E. *et al.* (1997) *Changes In The Social Patterning Of Health? the Case Of Finland 1986-1994.* **Social Science Medicine, 44**(6):789-99.

Landman, W.A. (1993) *Appropriate health care as a human right: a philosophical perspective.* In: Van Niekerk A, Editor. **Health Care As Human Right.** Stellenbosch: Unit For Bioethics, University Of Stellenbosch.

Langley, L.C. (1993) *A Conflict Management Model for a Nursing Service.* Thesis Doctor Curationis. Rand University, Johannesburg.

Lennox, J.A. (1995) *Health As An Objective Value.* **The Journal of Medicine and Philosophy, 20**:499-511.

Levin, J.S. (1996) *How Religion Influences Morbidity And Health: Reflections On Natural History, Salutogenesis And Host Resistance.* **Social Science Medicine, 43**(5):849-64.

Lidz, J.W. (1995) *Medicine as Metaphor In Plato.* **The Journal of Medicine and Philosophy, 20**:527-41.

Lillie-Blanton M, and Laveist, T. (1996) *Rac Ethnicity, The Social Environment, and Health.* **Social Science Medicine, 43**(1):83-91.

Lindsey, E. (1996) *Health within illness: experiences of chronically ill/disabled people.* **Journal of Advanced Nursing, 24**:465-72.

Linno G. (1999) Weather Bureau Cape Town.

Locker, D.(1996) *et al. Area Variations in Health Behaviours.* **Canadian Journal of Public Health. 87**(2)March-April:1325-29.

Lynch, J.W. *et al.* (1997) *Why Do Poor People Behave Poorly? Variation in Adult Health Behaviours And Psychosocial Characteristics by stages Of The Socioeconomic Life Course.* **Social Science Medicine March, 44**(6):809-819.

Macintyre, S. *et al.*(1995) *Gender differences in health : are things really as simple as they seem?* **Journal of Epidemiology and Community Health, 49**:534-54.

Mackenbach, J.P. and Kunst, A. (1997) *Measuring The Magnitude Of Socio-Economic Inequalities In Health: An Overview Of Available Measures Illustrated With Two Examples From Europe* **. Social Science Medicine, 44**(6):757-71.

Marieb, E.N. (1998) **Human Anatomy and Physiology.** Fourth Edition. California: Addison & Wesley School Division, Benjamin/Cummings Publishing Company.

McLeod, W.T. (Ed.) (1982) **New Collins Concise English Dictionary.** Glasgow: William Collins Sons & Co. LTD.

May J et al. (1998) Poverty and Inequality in South Africa. **http://www.polity.org.za / govdocs /reports / poverty.html**. 8 September 2000.

Meerstadt, P.W.D. (1996) *Health and moral responsibility*. **The Lancet, 347**,June: 1768.

Microsoft Internet Explorer (2000) provided on Worldonline. *What is a Drink. Alcoholism* , **http://www.gIness.com/ndhs/acoholism.html.** 1 March 2000.

Microsoft Internet Explorer (2000) provided on Worldonline. Facts And Statistics. Alcoholism. **http://www.gIness.com/ndhs/acoholism.html.** 1 March 2000.

Ministry of Health and Social Services Western Cape Province. (1995) *Finalization of Provincial Health Plan.* August, 1-60.

Mitchell, D.P. (1996) *Postmodernism, health and illness.* **Journal of Advanced Nursing, 23**:201-205.

Mouton, J. and Marais, H.C. (1989) Metodologie van die *Geesteswetenskappe: Basiese Begrippe.* **R.G.N.-studies in Navorsingmetodologie**, Derde Druk. Pretoria. J. C. Insto-Print.

Mouton, J. and Marais, H.C. (1992) *Basiese Begrippe: Metodologie van die Geesteswetenskappe:.* **R.G.N.-studies in Metodologie,** Hersiene Uitgawe. Derde Druk. Pretoria. R.G.N. Uitgewers.

Muhlenkamp, A.F. and Broerman, N.A. (1988) *Health Beliefs, Health Value, and Positive Health behaviors.* **Western Journal of Nursing Research, 10**(5):637-647.

Myers, H.F. *et al.* (1995) *Panel 111: Behavioral Risk Factors Related to Chronic Diseases in Ethnic Minorities.* **Health Psychology, 14**(7):613-621.

Paradis, G. *et al.* (1995) *Coeur en santé St-Henri - a heart health promotion programme in a low income, low education neighbourhood in Montreal, Canada: theoretical model and early field experience.* Journal of **Epidemiology and Community Health, 49**:503-512.

Paskett, E.D. *et al.* (1996) *Validation of Self-Reported Breast and Cervical Cancer Screening Tests among Low-Income Minority Women.* **Cancer Epidemiology, Biomarkers & Prevention, 5,**September 721-726.

Rassool, G.H. (1995) *The Health Status And Health Care Of Ethno-Cultural Minorities In the United Kingdom: An Agenda For Action.* **Journal for Advanced Nursing, 21**:199-201.

Ratsaka, M. and Hirschowitz, R. (1996) *Knowledge, Attitude and Beliefs Amongst Inhabitants Of High Density Informal Settlements With Regard To Sexualty And Aids In Alexandra Township.* **Curationis, 18**(2):June 41-44.

Rawl, S.M. (1992) *Perspectives on nursing care of Chinese Americans.* **Journal of Holistic Nursing, 10**:6-17.

Republic of South Africa Central Statistical Service. (1996) *October Household Survey 1995.* CSS Release November.

Rogers, M.E. (1979) **An Introduction to the Theoretical Basis Of Nursing.** New York : FA Davis Company.

Rodgers, W.S. (1991) **Explaining health and illness: an exploration of diversity.** New York : Wheatsheaf.

Rosenberg, M.W. and Hanlon NT. (1996) *Access And Utilization: A Continuum Of Health Service Environments.* **Social Science Medicine. 43**(6):975-983.

Rosenstock, I.M. *et al.* (1988) *Social Learning and the Health Belief Model.* **Health education Quarterly. 15**(2)Summer:175-183.

Sade, R.M. (1995) *A Theory of Health And Disease: The Objectivist-Subjectivist Dichotomy.* **The Journal of Medicine and Philosophy, 20**:513-525.

Sarntisart, I. (1994) *Poverty, Income, Inequality and Health Care Consumption in Thialand.* **Southeast Asian Journal Tropical Medicine Public Health. December, 25**(4):618-627.

Savage, M. and Benatar, S. (1990) An analysis of health and health services, in R.A. Schrire (Ed.). Critical choices for South Africa. Cape Town, Oxford University Press.

Seaman, C.H.C. (1987) **Research Methods. Principles, Practices and Theory for Nursing.** Third Edition. Connecticu : Appleton & Lange.

Segall, A.(1976) *Sociocultural Variation in Sick Role Behavioural Expectations.* **Social Science Medicine, 10**(1):47-51.

Shai-Mahoko, S.N. (1996) *Indigenous Healers In The North West Province: A Survey Of Their Clinical Activities in Health Care In The Rural Areas.* **Curationis. 19**(4)December:31-34.

Smeltzer, S.C. and Bare,B.G.(2000) Text Book of Medical Surgical Nursing. Ninth Edition. Philadelphia : Lippincott J.B.

South African Development Community (SADC). Health Sector. (1997) Policy Framework Document. August.

Spector, R.E. (1996) **Cultural Diversity in Health & Illness.** Fourth Edition. Connecticut : Appleton & Lange.

Statistics in Brief.(1997) Central Statistical Service Department, Republic of South Africa.

Statistics South Africa (1996) South Africa Census. Cape Town.

Strachan, K. (1999) *Going back to poisonous roots.* **HST Update Issue 4**(7):3.

Stellenberg, E.L. (1995) An Evaluation Of The Effect Of A Patient Education Programme On The Eventual Quality Of Life of a Laryngectomy Patient. Thesis for the degree Magister in Nursing, Stellenbosch University.

Stellenberg, E.L. (1996) Investigation into the factors influencing the health status of a farming community in the Durbanville rural area, (Unpublished).

Stellenberg, E.L. (1997) Investigation into the factors influencing the health status of a fishing community on the West Coast, (Unpublished).

Stronks, K. *et al.* (1996) *A documentation centre on socio-economic inequalities in health.* **Journal of Epidemiology Community Health February, 50**(1):5.

Sunday Times. (14 May 2000) Extra year for school children. Government plans compulsory pre-school classes.

Sweeney, M.A. and Olivier, P. (1981) **An Introduction to Nursing Research.** Pennyslvania : J.B. Lippincott Company.

Torres, S. and Villarruel A.M. (1995) *Health Risk Behaviors for Hispanic Women.* **Annual Review Nursing Research, 13**:293-319.

Travis, J.W. and Ryan, R.S. (1988) **The wellness workbook.** Second revised edition. Berkeley, California : Ten Speed Press.

Treece, E.W. and Treece, J.W (1986) **Elements of Research in Nursing.** Fourth Edition. St Louis : C.V. Mosby Company.

Uitenbroek, D.G. *et al.*(1996) *Health Lifestyle Behaviour and Socio-Demographic Characteristics. A Study Of Varna, Glasgow and Edinburgh.* **Social Science Medicine, 43**(3):367-377.

UNESCO (1998) *State of the World's Children.Report Focusing on Malnutrition*

Van Niekerk, A. Editor. (1993) *Health Care As Human Right.* Stellenbosch: Unit For Bioethics, University Of Stellenbosch.

Van Rooyen, R.J. and Snyman, J.R. (ed.) (1994) Mims Medical Specialities. 34(12). Pretoria : Division of Times Media Limited.

van Vuuren, S.J.E.J. and de Klerk, G.W. (1996) *Accessibility Of professional Health Care (PRHC) In Greater Bloemfontein.* **Curationis. 19**(2)December:19-24.

Vlok, M.E.(1991) **Manual of Community Nursing & Communicable Diseases.** Cape Town: Juta & C, Ltd.

Wannamethee, G. *et al.* (1995) *Does socioeconomic status in childhood affect cardiovascular risk in adulthood?* **Journal of Epidemiology and Community Health, 49**:534-554.

Wicking-Baird, M.C. et al. (1997) Cape Town Brown Haze Study. Energy Research Institute. University of Cape Town, South Africa.

Wilson, F. and Ramphele, M. (1989) **Uprooting Poverty. The South African Challenge.** Cape Town: David Philip.

Winett, R.A. (1995) *A Framework for health promotion and disease prevention programs.* **American Psychology. 50:**341.

World Development Report (1993) Washington DC., World Bank.

World Health Organization.(1947) *Constitution of the World Health Organiization.* **Chronical of the World Health Organization 1.** Geneva: WHO.

World Health Organization. (1978) *International Conference on Primary Health Care: Declaration of Alma-Ata.* 6-12 September, 2-31.

Worldonline Centreframe. (1998) *National Serious Crime Picture. South Africa.***http:www.polity.org.za/govdocs/reports/crime297.html**

Worldonline Centreframe. (2000). *Alcohol use: A drink now and then...* **http://www.glness.com/ndhs/ alcoholism.html**

Yach, D. *et al.* (1987) *Use of indicators in achieving "Health for All" in South Africa.* **South African Medical Journal, 72**:805-807.

RELATED READINGS:

Arber, S. (1997) *Comparing Inequalities In Women's And men's Health: Britian In the 1990's.* Social Science Medicine, 44(6):773-787.

Blanksby, B.A. *et al.* (1996) *Recreational patterns, body composition and socioeconomic status of Western Australian secondary school students.* **Annals of Human Biology, 23**(2):101-112.

Borrell, C. and Arias, A. (1995) *Socioeconomic factors and mortality in urban settings: the case of Barcelona, Spain. health a moral responsibility?* **Journal of Epidemiology and Community Health, 49**:460-465.

Bournes, D.A. and DasGupta, T.L. (1997) *Professional Practice Leader: A Transformational Role that Addresses Human Diversty.* **Nursing Administration Quarterly. Summer, 21**(4):61-68.

Butler, C. et al. (1996) *The Practitioner, The Patient And Resistance To Change: Recent Ideas on Compliance.* **Canadian Medical Association Journal. 154**(9):1357-1362.

Charlton, B.G. and White, M. (1995) *Living on the margin: a salutogenic model for socio-economic differentials in health.* **Public Health. 109**:233-43.

Cockerham, W.C. (1978) **Medical Sociology**. Engelwood Cliffs, NJ. : Prentice Hall.

Cockerham, W.C. (1989) **Medical Sociology.** Engelwood Cliffs, NJ. : Prentice Hall.

De Villiers, L. and van der Walt, D. (1995) *Including Transcultural Nursing Content In the Curriculum - Part 2.* **Curationis, 18**(4):61-64.

De Villiers, L. and van der Walt, D. (1995) *Putting Leininger's Nursing Theory "Culture Care Diversity And Universality" into Operation in the Curriculum - Part 1.* **Curationis, 18**(1):56-60.

Doswell, W.M. and Erlen, J.A. *Multicultural Issues And Ethical Concerns In The Delivery of Nursing Care Interventions.* **Nursing Clinics Of North America. 1998 June, 33**(2): 353-361.

Dye, T.D. and Lee, R.V. (1994) *Socioeconomic status: developing a quantitative, community based index in rural Kashmir.* Short Report: Department of Medicine, Children's Hospital of Buffalo, USA, March.

Exley, C. *et al.* (1996) *Attitudes And Beliefs Within The Sikh Community regarding organ Donation: A Pilot Study.* **Social Science Medicine, 43**(1):23-28.

Furnham, A. and Andrew, R. *A.*(1996) *Cross-Cutural study Of Attitudes Towards Seeking Psychological Help.* **Psychological Reports 79**:289-290.

Furnham, A. and Thompson, L. (1996) *Lay Theories of Heroin Addiction.* **Social Science Medicine. 43**(1):29-40.

Fabrega, H. Jr (1973) *Toward a Model of Illness behaviour.* **Medical Care. X1**(6) December, 470-484.

Flynn. L. (1997) *The Health Practices Of Homeless Women: A Causal Model.* **Nursing Research. March, 46**(2):72-77.

Frey, M. (1996) *Behavioral Correlates Of Health and Illness in Youths with Chronic Illness.* **Applied Nursing Research. 9**(4):167-176.

Green-Hernandez, C. (1997*) Application of Caring Theory in Primary Care: A Challenge for Advanced Practice.* **Nursing Administration Quarterley. Summer, 21**(4):77-91.

Guldan, G.S. (1997) *Obstacles To Community Health Promotion.* Social Science **Medicine. 43**(5):689-695.

Henrard, J.C. (1996) *Cultural Problems Of Ageing Especially Regarding Gender And Intergenerational Equity.* **Social Science Medicine, 43**(5):667-680.

Iwata, N. and Roberts, R.E. (1996) *Age Differences Among Japanese On The Centre For Epidemiologic Studies Depression scale: An Ethnocultural Perspective On Somatization.* **Social Science Medicine, 43**(60):967-974.

Johanson, M. (1997) et al. *Addressing Life Style In primary Health Care.* **Social Science Medicine, 44**(3):389-400.

Kristeller, J.L. et al. (1996) *Attitudes toward Risk Factor Behavior of relatives of Cancer patients.* **Preventive Medicine. 25**:62-69.

Leiser, D. *et al.* (1996) *Mothers' Lay Models Of the Causes And Treatment Of Fever.* **Social Science Medicine. 43**(3):379-387.

Mechanic, D. (1968) **Medical Sociology.** New York: Free Press.

Microsoft Internet Explorer (2000) Provided on Worldonline. **World Health Organization – Mission Statement. . http:w3.whosea.org/sitemap.htm**

Microsoft Internet Explorer (2000) Provided on Worldonline. **World Health Organisation: Nutrition http://www.worldonline.co.za**

Microsoft Intnernet Explorer (2000) Provided on Worldonline. *World Health Organisations: Health for All.* **http://www.worldonline.co.za**

Microsoft *Itnernet Explorer (2000)* Provided on Worldonline. *Worldonline and Healthiness.* **http://www.worldonline.co.za**

Montgomery, S.C. *et al.* (1995) *Are young unemployed men at greater risk of future illness, even before they experience any unemployment?* **Journal of Epidemiology and Community Health, 49**:534-554.

Mutua, M. Poverty And Human Rights (2000) The Bases Of Rights Discourse. Micosoft Internet Explorer provided on Worldonline. **http://www.worldonline.co.za**

National Progressive Primary Health Care Network (2000) Provided on Worldonline. *Definition of Progressive Primary Health Care.* **http://www.worldonline.co.za**

National Progressive Primary Health Care Network (1998) Provided on Worldonline. *NPPHCN Health Rights are Human Rights Campaign.* **http://www.worldonline.co.za**

Nicholson, A. *et al.* (1995) *Sex and socioeconomic differences in medical care for ischaemic heart disease.* **Journal of Epidemiology and Community Health, 49**:534-554.

Norman, P. (1995) *Applying the health belief model to the prediction of attendance at health checks in general practice.* **British Journal of Clinical Psychology, 34**:461-470.

Schur, C. and Albers, L.A. (1996) *Language, Sociodemographics, and Health Care Use of Hispanic Adults.* **Journal of Health care for the poor and Underserved, 7**(2):140-158.

Twinn, S. *et al.*(1996) **Community Health Care Nursing. Principles For Practice.** Oxford: Reed Educational and Professional Publishing Ltd.

Walker, A.R.P. (1996) *Some thoughts on the influence of attitude on health and ageing.* **Journal Royal Social Health, 116**(5)October:283-286.

Werner, D. Where (1982) **There Is No Doctor a Village Health Care Handbook.** California : The Hesperian Foundation.

Williams, S.K.P. (1996) *Health Perceptions and Self-care Response to Illness among Users of Medical and Alternative Services in St Andrew Jamaica.* **West Indies Medical Journal. 45**:78-81.

Wilson, H.S.(1989) **Research In Nursing.** Second Edition.California, Addison-Wesley Publishing Company.

Zwi, A. and Mills, A. (1995) *Health Policy in low income countries: towards the millennium.* **Journal of Epidemiology and Community Health 49**:534-54.

APPENDIX A

CONSENT FORMS

CONCEPT INFORMATION AND CONSENT DOCUMENT

TITLE OF RESEARCH PROJECT/STUDY:

An investigation into the factors influencing the health status of the Coloured people of the Western Cape in an urban setting.

Reference Number: _____

Declaration of the participant.

I, the undersigned, _____ (Participant)

ID. _____

of. _____ (Address)

A. I confirm that:

1. I, the participant have been invited to participate in the above research project / study undertaken by the Department of Nursing, University of Stellenbosch.

2. It was explained that:

2.1 An investigation is being undertaken into the factors influencing the health status of the Coloured people of the Western Cape. The purpose of this study is to gain knowledge about the health status of the Coloured people. This will enable the policy makers in health care to develop a more systematic approach in the planning of health care. A more appropriate application of health care programmes in the prevention of disease and the promotion of health will be possible.

2.2 My participation includes the following:

2.2.1 An interview will be conducted with me in which personal questions will be asked, for example about my financial income, employment, diet, exercises, smoking, use of alcohol.

2.2.2 A general physical examination will be done on me to identify any problems that I am not aware of.

2.2.3 My blood pressure, pulse and respiration will be measured.

2.2.4 The following tests will be done:

- a urine test specifically for blood, protein, and glucose
- a haemoglobin test to find out if I am anaemic
- a cholesterol test to find out if I am at risk for heart problems
- blood sugar test to find out if I am at risk for diabetes mellitus.

A finger prick will be carried out on me with the help of a commercially aided apparatus to do the above tests. I understand that a nursing sister will carry out these tests.

2.2.5 My participation will not have any negative implications for me.

3.1 I have been informed that although the results of this study are to be published I will remain anonymous.

4. All information obtained from me will remain confidential, but will however, be used in a thesis for a doctorate degree and in professional scientific journals.

5. I have been informed that I may withdraw from the study at any time if I so wish to.

6. There is no personal gain, whether financial or other, in my participation in this study.

7. However, my participation is a voluntary contribution to the planning of health care of the general population.

8. An English / Afrikaans explanation of the above information was given to me by _____ in the language in which I am proficient.
I was given the opportunity to ask questions and all my questions were answered satisfactorily.

9. I was not pressurised to participate in this study. I understand that I may withdraw any time without any repercussions.

10. I understand that this study will have no financial implications for me.

B. ***I hereby agree voluntarily*** to participate in the above project / study.

Signed / Confirmed at _____ on _____19____

_____. Witness _____

Participant's Signature
Alternatively, Right thumbprint.

Statement by or for Researcher

I, _____. declare that I:

1. Explained the information contained in this document to

MR / Ms _____ (participator)

2. Requested her/him to ask questions if uncertainty did exist about any aspect of this document.

3. That this discussion took place in English / Afrikaans.

4. Dr/ Mr / Ms _____

Signed at _____ on _____19____

_____. Witness _____

Researcher / Researcher's Representative

KONSEP INLIGTINGS- EN TOESTEMMING DOKUMENT

DIE TITEL VAN DIE NAVORSINGSPROJEK / STUDIE:

"An investigation into the factors influencing the health status of the Coloured people of the Western Cape."

VERWYSINGSNOMMER: _____

VERKLARING DEUR DEELNEMER.

Ek, die ondergetekende, _____ (Deelnemer)

ID _____

Van _____ (Adres)

A. Ek bevestig dat:

1. Ek, die deelnemer uitgenooi is om deel te neem aan bogenoemde navorsingsprojek wat deur die Departement van Verpleegkunde van die Universiteit van Stellenbosch onderneem word.

2. Daar aan my verduidelik is dat:

2.1 'n ondersoek onderneem word na die faktore wat die gesondheidstatus van die kleurling bevolking van die Weskaap beïnvloed. Die doel van die studie is om meer kennis omtrent die gesondheidstatus van die kleuring bevolking te bekom. Dit sal die beleidmakers in staat stel om 'n meer sistematiese benadering m.b.t. die beplanning van gesondheid te ontwikkel.'n Meer toepaslike toepassing van gesondheidsorg-programme in die voorkoming van siektetoestande en die bevordering van gesondheid sal moontlik wees.

2.2 My betrokkenheid sluit in die volgende:

2.2.1 'n Onderhoud sal met my gevoer word, waarin persoonlike vrae gestel sal word, byvoorbeeld m.b.t. my finansiële inkomste, werk, dieët, oefeninge, rook, gebruik van alkohol.

2.2.2 'n Algemene fisiese ondersoek sal op my uitgevoer word om enige proleme te identifiseer wat ek nie van bewus is nie.

2.2.3 My bloeddruk, pols en respirasie sal gemeet word.

2.2.4 Die volgende toetse sal gedoen word:

- 'n Uriene toets spesifiek vir bloed, proteiën en glukose,
- 'n hemoglobien toets om te bepaal of ek anemies is,
- 'n cholesterol toets om te bepaal of ek 'n risiko is vir hart probleme
- 'n bloedsuiker toets om te bepaal of ek 'n risiko is vir diabetes mellitus.

'n Vingerprik sal uitgevoer word op my met die hulp van 'n kommersiële apparaat om bogenoemde toetse uit te voer. Ek verstaan dat die toetse deur 'n verpleegsuster uitgevoer sal word.

2.2.5 My deelname sal geen negatiewe implikasies vir my in hou nie.

3. Ek was ingelig dat ek anoniem sal bly tenspyte van die feit dat die resultate gepubliseer sal word

4. Ek meegedeel is dat die inligting wat ingewin word as vertoulik behandel sal word, maar wel aangewend sal word in 'n tesis vir 'n doktorale graad en in professionele wetenskaplike tydskrifte.

5. Ek is ingelig dat ek op enige oomblik van die studie mag onttrek indien ek dit so sou verkies.

6. Daar is geen persoonlike voordeel finansiëel of ander m.b.t. my deelname aan die studie nie.

7. My deelname is egter 'n vrywillige bydrae tot die beplanning van gesondheidsorg van die algemene bevolking.

8. 'n Engelse/Afrikaanse verduideliking is oor bogenoemde inligting aan my gegee deur.....in die taal wat ek magtig is.
Ek was die geleentheid gegee om vrae te stel en al my vrae was bevredigend beantwoord.

9. Daar was geen dwang op my geplaas om aan die studie deel te neem nie. Ek verstaan dat ek enige tyd van die studie mag onttrek sonder enige reperkussies.

10. Ek verstaan dat die studie geen finansiële implikasies vir my inhou nie.

B. Ek stem hiermee vrywillig in om deel te neem aan bogenoemde projek / studie.

Geteken/bevestig te _____ op _____19_____

_____ _____

Deelnemer se handtekening/ Getuie.
Regter duim afdruk

VERKLARING DEUR OF NAMENS NAVORSER.

ek, _____.verklaar dat ek:

1. Die inligting vervat in die dokument aan _____ verduidelik het;

2. Hom/haar versoek het om vrae aan my te stel indien daar enigiets onduidelik was omtrent die dokument;

3. Dat hierdie gesprek in Engels / Afrikaans plaasgevind het.

Dr/Mnr/Me. _____..

Geteken te.. _____ op. _____ 19.___

_____ _____

Navorser/Navorser se verteenwoordiger Getuie.
Junie 1998.

APPENDIX B

QUESTIONNAIRE

ID Number

Do not mark outside this line

QUESTIONNAIRE FOR USE IN A STRUCTURED INTERVIEW

IT WOULD BE APPRECIATED IF YOU ANSWER THE FOLLOWING QUESTIONS AS OBJECTIVELY AS POSSIBLE. USE A SOFT LEAD PENCIL TO COLOUR IN THE BUBBLE AS NEATLY AS POSSIBLE INDICATING YOUR CHOICE. PROVIDE ONLY ONE RESPONSE PER STATEMENT/QUESTION. WHERE MORE THAN ONE BUBBLE IN A STATEMENT IS MARKED, BOTH RESPONSES WILL BE AUTOMATICALLY DISCARDED.

==========

A. BIOGRAPHICAL INFORMATION

1. Residential area
- Bellville-South
- Belhar
- Elsiesriver
- Kraaifontein
- Kuilsriver
- Ravensmead

2. House structure classification
- Formal: Upper middle ecomomic
- Formal: Lower economic
- Informal

3. Age
- between 21 and 30 years
- 31 - 40 years
- 41 - 50 years

4. Gender
- Male
- Female

5. Marital status
- Single
- Married
- Living together
- Divorce/separated
- Widow/widower

6. Are you literate?
- Yes
- No

7. Level of Education: Schooling
- No schooling
- Grade 1 to Grade 7
- Grade 8 to Grade 10
- Grade 1 to Grade 12 or a equivalent qualification

8. Highest level of Education: Post schooling
- No post schooling education
- College Diploma
- University degree
- Post graduate Qualification
- Other (please specify)

9. Are you a breadwinner?
- Yes
- No

ETHELWYNN1.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

10. If "YES" to question 9, how many dependants (parents, children, grandchildren) do you have?
- 1
- 2
- 3
- 4 and more
- Not applicable

11. Number of people regularly staying in the dwelling _____
- 1 2 3 4 5 6 7 8 9 0
- 1 2 3 4 5 6 7 8 9 0

12. Are you presently employed?
- Yes
- No

13. If "NO" to question 12, do you have a source of income?
- Yes
- No
- Not applicable

14. If "YES" to question 13, which of the following sources of financial income do you receive?

(a) Disability grant?
- Yes
- No
- Not applicable

(b) Work pension?
- Yes
- No
- Not applicable

(c) Other (please specify) _____
- Yes
- No
- Not applicable

15. Income
- Weekly
- Byweekly
- Monthly
- Other (please specify) _____
- Not applicable

16. Range of income per month.
- Less than R1 500
- Between R1 501 and R3 000
- Between R3 001 and R4 500
- Between R4 501 and R6 000
- Between R6 001 and R7 500
- More than R7 501
- Not applicable

17. Occupation
- Professional
- Technical
- Clerical
- Tradesman
- Labourer
- Other (please specify) _____
- Not applicable

ETHELWYNN2.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

B. SOCIAL

18. Do you have a history of taking alcohol?
- Yes
- No

19. If "YES" to question 18, do you still take alcohol?
- Yes
- No
- Not applicable

20. If "YES" to question 19, when do you consume alcohol?
- Daily
- Weekends
- Socially
- Rarely
- Not applicable

21. If question 20 is applicable, what type of alcohol do you consume?

(a) Beer (e.g. Lion, castle etc.)
- Less than 500 ml per day
- Between 500ml and 1000ml per day
- More than 1000ml per day
- No
- Not applicable

(b) Wine
- Less than 500ml per day
- Between 500ml and 1000ml per day
- More than 1000ml per day
- No
- Not applicable

(c) Spirits (E.g. cane, gin, whiskey, brandy etc.)
- Less than 100ml per day
- Between 100ml and 500ml per day
- More than 500ml per day
- No
- Not applicable

(d) Other (please specify) _____
- Less than 500ml per day
- Betwen 500ml and 1000ml per day
- More than 1000ml per day
- No/Not applicable

22. If you answered "NO" to question 19, did you receive advice to stop taking alcohol?
- Yes
- No
- not applicable

ETHELWYNN3.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

23. If "YES" to question 22, from whom did you receive advice?

(a) Self education
- Yes
- No
- Not applicable

(b) Nurse
- Yes
- No
- Not applicable

(c) Doctor
- Yes
- No
- Not applicable

(d) Friends or Colleagues
- Yes
- No
- Not applicable

(e) Other (please specify) _____
- Yes
- No
- Not applicable

24. Do yo have a history of smoking?
- Yes
- No

25. If "YES" to question 24, do you still smoke?
- Yes
- No
- Not applicable

26. If "YES" to question 25, how many cigarettes do you smoke?
- fewer than 10 per day
- 10 to 20 per day
- More than 20 per day
- Other (please specify) _____
- Not applicable

27. If you answered "NO" to question 25, when did you stop smoking?
- A month ago
- About two to six months ago
- Between seven and 12 months ago
- Between one and two years ago
- More than two years ago
- Not applicable

28. If "NO" to question 25, did you receive advice to stop smoking?
- Yes
- No
- Not applicable

ETHELWYNN4.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

29. If "YES" to question 28, from whom did you receive advice?

(a) Self education
- Yes
- No
- Not applicable

(b) Nurse
- Yes
- No
- Not applicable

(c) Doctor
- Yes
- No
- Not applicable

(d) Friends or Colleagues
- Yes
- No
- Not applicable

(e) Other (please specify) _____
- Yes
- No/Not applicable

30. Do you have a history of taking drugs?
- Yes
- No

31. If "YES" to question 30, do you still take drugs?
- Yes
- No
- Not applicable

32. If "YES" to question 31, what type of drugs do you use?

(a) Pain tablets
- Yes
- No
- Not applicable

(b) Anti-inflammatory drugs
- Yes
- No
- Not applicable

(c) Marijuana (Dagga)
- Yes
- No
- Not applicable

(d) Mandrax
- Yes
- No
- Not applicable

(e) Other (please specify) _____
- Yes
- No / Not applicable

ETHELWYNN5.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

33. How many of these drugs do you use as indicated above do you use?
- More than 2 per day
- Between 2 and 4 per day
- More than 4 per day
- Other (please specify) _____
- Not applicable

34. If "YES" to question 32, when do you take these drugs?
- Daily
- Weekends
- Other (please specify) _____
- Not applicable

35. If you answered "NO" to question 31, when did you stop taking drugs?
- A month ago
- About two to six months ago
- Between seven and 12 months ago
- Between one and two years ago
- More than two years ago
- Not applicable

36. If "NO" to question 30, did you receive advice to stop taking drugs?
- Yes
- No
- Not applicable

37. If "YES" to question 36, from whom did you receive advice?

(a) Self education
- Yes
- No
- Not applicable

(b) Nurse
- Yes
- No
- Not applicable

(c) Doctor
- Yes
- No
- Not applicable

(d) Friends or Colleagues
- Yes
- No
- Not applicable

(e) Other (please specify) _____
- Yes
- No/Not applicable

ETHELWYNN6.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

C. DIET

38. How many meals do you have per day?
- ☐ 1 meal
- ☐ 2 meals
- ☐ 3 meals
- ☐ more than 3 meals

39. How do you rate your availability of money for meals (a meal includes vegetables and meat, or equivalent, not only a sandwich)?
- ☐ Always have money
- ☐ Most times have money
- ☐ Sometimes have money
- ☐ Never have money

40. How often do you have fresh vegetables?
- ☐ Daily
- ☐ At least three times a week
- ☐ At least twice a week
- ☐ At least once a week
- ☐ Seldom
- ☐ Never
- ☐ Other (please specify) _____

41. If "SELDOM" or "NEVER" to question 40, please specify why?

.....

.....

.....

42. How often do you have fresh fruit?
- ☐ Daily
- ☐ At least three times a week
- ☐ At least twice a week
- ☐ At least once a week
- ☐ Seldom
- ☐ Never
- ☐ Other (pleace specify) _____

43. If "SELDOM" or "NEVER" at question 42, please specify why.

.....

.....

.....

ETHELWYNN7.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

44. How often do you have red meat?
- Daily
- At least three times a week
- At least twice a week
- At least once a week
- Seldom
- Never
- Other (please specify) _____

45. If "SELDOM" or "NEVER" at question 44, please specify why.

.....

.....

.....

46. How often do you have fish?
- Daily
- At least three times a week
- At least twice a week
- At least once a week
- Seldom
- Never
- Other (please specify) _____

47. If "SELDOM" or "NEVER" to question 46, please specify why.

.....

.....

48. How often do you have white meat?
- Daily
- At least three times a week
- At least twice a week
- At least once a week
- Seldom
- Never
- Other (please specify) _____

49. If "SELDOM" or "NEVER" to question 48, please specify why.

.....

.....

.....

50. What type of meat do you consume?
- Red meat only (e.g. beef)
- White meat only (e.g. chicken, fish)
- Red and white meat equally
- Other (please specify) _____

ETHELWYNN8.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

51. Do you like salt?
- Yes
- No

52. How will you rate your salt intake after cooking?
- Always add extra salt to food
- Occasionally add extra salt to food
- Seldom add extra salt to food
- Never add extra salt to food

D. EXERCISE, STRESS MANAGEMENT AND LEISURE TIME

53. Do you associate good health with exercise?
- Yes
- No

54. Do you exercise?
- Yes
- No

55. If "YES" to question 54, how often do you do exercise?
- Daily
- At least three times per week
- At least once a week
- Occasionally
- Not applicable

56. If "YES" to question 54, what type of exercise do you do?

(a) Walking — Yes — No — Not applicable

(b) Swimming — Yes — No — Not applicable

(c) Running — Yes — No — Not applicable

(d) Aerobics — Yes — No — Not applicable

(e) Other (please specify) — Yes — No — Not applicable

57. If "NO" to question 54, what hampers you from exercising?

(a) Limited or no time available — Yes — No — Not applicable

(b) Physically exhausted after work — Yes — No — Not applicable

(c) Gymnasiums are too costly — Yes — No — Not applicable

(d) Just lazy — Yes — No — Not applicable

(e) Other (please specify) — Yes — No — Not applicable

ETHELWYNN9.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

58. What is your understanding of stress?

.....

.....

.....

59. Do you experience stress?

☐ Yes
☐ No

60. If "YES" to question 59, what causes your stress?

(a) Family problems ☐ Yes ☐ No ☐ Not applicable

(b) Financial problems ☐ Yes ☐ No ☐ Not applicable

(c) Work related issues ☐ Yes ☐ No ☐ Not applicable

(d) Other (please specify) _____ ☐ Yes ☐ No ☐ Not applicable

61. If "YES" to question 59, how do you manage your stress?

(a) Spending some time in the garden : ☐ Yes ☐ No ☐ Not applicable

(b) Reading a book : ☐ Yes ☐ No ☐ Not applicable

(c) Socializing with friends : ☐ Yes ☐ No ☐ Not applicable

(d) Other (please specify) _____ : ☐ Yes ☐ No ☐ Not applicable

62. Do you have a social support system when stressed? ☐ Yes ☐ No ☐ Not applicable

ETHELWYNN10.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

63. If "YES" to question 62, specify your support system.

(a) Family ☐ Yes ☐ No ☐ Not applicable

(b) Spouse ☐ Yes ☐ No ☐ Not applicable

(c) Friends ☐ Yes ☐ No ☐ Not applicable

(d) Colleagues at work ☐ Yes ☐ No ☐ Not applicable

(e) Other (please specify) _____

☐ Yes ☐ No ☐ Not applicable

64. Do you have leisure/free time for yourself?

☐ Yes
☐ No

65. If "YES" to question 64, what do you do during your leisure/free time?

(a) Enjoy a hobby ☐ Yes ☐ No ☐ Not applicable

(b) Socializing ☐ Yes ☐ No ☐ Not applicable

(c) Enjoy a sport activity ☐ Yes ☐ No ☐ Not applicable

(d) Gardening ☐ Yes ☐ No ☐ Not applicable

(e) Other (please specify) _____

☐ Yes ☐ No ☐ Not applicable

ETHELWYNN11.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

66. If "NO" to question 64, why do you have no leasure/free time?

(a) Heavy daily work schedule
☐ Yes ☐ No ☐ Not applicable

(b) Single parent with a family
☐ Yes ☐ No ☐ Not applicable

(c) Forced to work and still take care of the household chores
☐ Yes ☐ No ☐ Not applicable

(d) Other (please specify) _____
☐ Yes ☐ No ☐ Not applicable

E. ETHNO-CULTURAL BELIEFS: HEALTH AND ILLNESS

67. What is your understanding of health?

.....

.....

.....

68. Are there any ethno-cultural beliefs which you relate to your health e.g. Xhosa males must be initiated in order to become a "man"?

.....

.....

.....

69. Do you have any objections from a cultural point of view to receiving sort of medical treatment?
☐ Yes
☐ No

70. If "YES" to question 69, please explain.

.....

.....

.....

ETHELWYNN12.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

71. Is it your belief to self-medicate any illness first before seeing a medical doctor?
- ☐ Yes
- ☐ No

72. If "YES" to question 71, how do you treat yourself?

(a) Using home remedies such as herbs ☐ Yes ☐ No ☐ Not applicable

(b) Using off the shelf medication ☐ Yes ☐ No ☐ Not applicable

(c) Visit a "medicine woman/man" ☐ Yes ☐ No ☐ Not applicable

(d) Using folklore medicine ☐ Yes ☐ No ☐ Not applicable

(e) Visit a herbalist ☐ Yes ☐ No ☐ Not applicable

(f) Visit a chiropractitioner ☐ Yes ☐ No ☐ Not applicable

(g) Other (please specify) ☐ Yes ☐ No ☐ Not applicable

73. What is your understanding of illness?

.....

.....

.....

F. RELIGIOUS BELIEFS INFLUENCING HEATLH

74. What are your religious beliefs about health?

.....

.....

.....

75. Do you have any objections from a religious point of view to receiving medical treatment.
- ☐ Yes
- ☐ No

76. If "YES" to question 75, specify these objections.

.....

.....

.....

ETHELWYNN13.DAT

ID Number

Do not mark outside this line

77. Do you have to consult with your religious leader before receiving medical treatment such as surgery?
- Yes
- No

78. What are your religious beliefs about illness?

.....

.....

.....

G. ENVIRONMENTAL FACTORS

79. Do you have any troubling environmental problems influencing your health e.g. air pollution, etc.?
- Yes
- No

80. If "YES" to question 79, please specify.

(a) Crime	Yes	No	Not applicable
(b) Noise pollution	Yes	No	Not applicable
(c) Air pollution	Yes	No	Not applicable
(d) Heavy traffic	Yes	No	Not applicable
(e) Other (please specify) _____	Yes	No	Not applicable

H. HEALTH SERVICES AND HEALTH STATUS

81. What type of health service do you use?

(a) State Health Clinic	Yes	No	Not applicable
(b) Day hospital	Yes	No	Not applicable
(c) State hospital (academic/regional/community)	Yes	No	Not applicable
(d) Private doctor	Yes	No	Not applicable
(e) Private hospital	Yes	No	Not applicable

ETLHEWYNN14.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

82. Do you find your health service accessible?
- Yes
- No

83. If "NO" to question 82, specify why.

.....

.....

.....

.....

84. Do you find your health service affordable?
- Yes
- No

85. If "NO" to question 84, please specify.

.....

.....

.....

.....

86. Do you have a medical aid fund?
- Yes
- No

87. Are you using your health services?
- Yes
- No

88. If "NO" to question 87, please specify.

.....

.....

.....

.....

ETHELWYNN15.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

90. Is there anything that you would like to share with me about health?

.....

.....

.....

.....

91. Is there anything that you would like to share with me about illness?

.....

.....

.....

92. Do you have any health problems at present? : ☐ Yes ☐ No

93. If "YES" at question 92, please specify.

.....

.....

.....

.....

94. On a scale of 1 to 10 how would you rate your health?

☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10

|----|----|----|----|----|----|----|----|----|----|

Bad Neutral Excellent

95. Motivation why you have given yourself this rating

.....

.....

.....

96. Over the past five years what would you say was the most common problem that forced you to see a doctor?

.....

.....

.....

ETHELWYNN16.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

		Not applicable	No	Yes
I	PHYSICAL HEALTH ASSESSMENT			
	CHECKLIST FOR THE REVIEW OF SYSTEMS			
1.	GENERAL HEALTH			
(a)	Weight loss (duration _____)	☐	☐	☐
(b)	Weakness (duration _____)	☐	☐	☐
(c)	Feelings of fatigue (duration _____)	☐	☐	☐
(d)	Mood changes (duration _____)	☐	☐	☐
(e)	Night sweats (duration _____)	☐	☐	☐
(f)	Bleeding tendencies (duration _____)	☐	☐	☐
(g)	Other (please specify _____ (duration _____)	☐	☐	☐
2.	SKIN			
(a)	Eczema (duration _____)	☐	☐	☐
(b)	Psoriasis (duration _____)	☐	☐	☐
(c)	Changes in moles (e.g size, colour) (duration _____)	☐	☐	☐
(d)	Other (please specify _____ (duration _____)	☐	☐	☐
3.	NEUROLOGICAL SYSTEM			
(a)	Headaches (duration _____)	☐	☐	☐
(b)	Dizziness (duration _____)	☐	☐	☐
(c)	Fainting (duration _____)	☐	☐	☐
(d)	Convulsions (duration _____)	☐	☐	☐
(e)	Other (please specify _____ (duration _____)	☐	☐	☐
4.	MOUTH AND THROAT			
(a)	Bleeding gums (duration _____)	☐	☐	☐
(b)	Toothache (duration _____)	☐	☐	☐
(c)	Cavities (duration _____)	☐	☐	☐
(d)	Difficulty swallowing (duration _____)	☐	☐	☐
(e)	Voice changes or hoarseness (duration _____)	☐	☐	☐
(f)	Other (please specify) _____ (duration _____)	☐	☐	☐
(g)	ASK QUESTION 4(G) ON PAGE 21			

ETHELWYNN17.DAT

ID Number

Do not mark outside this line

		Not applicable	No	Yes
I PHYSICAL HEALTH ASSESSMENT (continued)				
5. BREASTS (ONLY FEMALE)				
(a) Nipple discharge	(duration _____)	☐	☐	☐
(b) Scaling around nipple	(duration _____)	☐	☐	☐
(c) Cracks around nipple	(duration _____)	☐	☐	☐
(d) Dimples	(duration _____)	☐	☐	☐
(e) Lumps	(duration _____)	☐	☐	☐
(f) Other (please specify _____	(duration _____)	☐	☐	☐
(g) ASK QUESTION 5(G) ON PAGE 21				
(h) ASK QUESTION 5(H) ON PAGE 21				
6. RESPIRATORY SYSTEM				
(a) Chest pain	(duration _____)	☐	☐	☐
(b) Cough	(duration _____)	☐	☐	☐
(c) Shortness of breath	(duration _____)	☐	☐	☐
(d) Wheezing	(duration _____)	☐	☐	☐
(e) Coughing up blood	(duration _____)	☐	☐	☐
(f) Lung disease present (please specify) _____	(duration _____)	☐	☐	☐
(g) Other (please specify _____	(duration _____)	☐	☐	☐
7. CARDIOVASCULAR SYSTEM				
(a) Heart disease present	(duration _____)	☐	☐	☐
(b) Palpitations	(duration _____)	☐	☐	☐
(c) Heart murmurs	(duration _____)	☐	☐	☐
(d) High blood pressure	(duration _____)	☐	☐	☐
(e) Anaemia	(duration _____)	☐	☐	☐
(f) Varicose veins	(duration _____)	☐	☐	☐
(g) Leg swelling	(duration _____)	☐	☐	☐
(h) Ulcers	(duration _____)	☐	☐	☐
(g) Other (please specify _____	(duration _____)	☐	☐	☐

ID Number

Do not mark outside this line

		Not applicable	No	Yes
I	PHYSICAL HEALTH ASSESSMENT (continued)			
8.	GASTROINTESTINAL TRACT			
(a)	Nausea (duration _____)	☐	☐	☐
(b)	Vomiting (duration _____)	☐	☐	☐
(c)	Loss of appetite (duration _____)	☐	☐	☐
(d)	Indigestion (duration _____)	☐	☐	☐
(e)	Heartburn (duration _____)	☐	☐	☐
(f)	Bright red blood in stools (duration _____)	☐	☐	☐
(g)	Tarry black stools (duration _____)	☐	☐	☐
(h)	Diarrhoea (duration _____)	☐	☐	☐
(i)	Constipation (duration _____)	☐	☐	☐
(j)	Abdominal pain (duration _____)	☐	☐	☐
(k)	Rectal pain (duration _____)	☐	☐	☐
(l)	Other (please specify) _____ (duration _____)	☐	☐	☐
9.	URINARY TRACT			
(a)	Frequency (duration _____)	☐	☐	☐
(b)	Dribbling (duration _____)	☐	☐	☐
(c)	Urgency (duration _____)	☐	☐	☐
(d)	Urination at night (duration _____)	☐	☐	☐
(e)	Difficulty starting a stream (duration _____)	☐	☐	☐
(f)	Blood in the urine (duration _____)	☐	☐	☐
(g)	Incontinence (duration _____)	☐	☐	☐
(h)	Pain or burning upon urination (duration _____)	☐	☐	☐
(i)	Sexually transmitted disease present (please specify) _____ (duration _____)	☐	☐	☐
(j)	Other (please specify _____ (duration _____)	☐	☐	☐

10. REPRODUCTIVE SYSTEM - FEMALES

10.1 MENSTRUAL CYCLE

ASK QUESTION 10.1 (A) AND (B) ON PAGE 21

ID Number

Do not mark outside this line

	Not applicable	No	Yes
I PHYSICAL HEALTH ASSESSMENT (continued)			
10.2 ANY OTHER PROBLEM			
(a) Bleeding between periods (duration _____)	☐	☐	☐
(b) Pain during intercourse (duration _____)	☐	☐	☐
(c) Vaginal discharge (duration _____)	☐	☐	☐
(d) Vaginal itching (duration _____)	☐	☐	☐
(e) Other (please specify _____ (duration _____)	☐	☐	☐
11. REPRODUCTION SYSTEM - MALES			
(a) Penile discharge (duration _____)	☐	☐	☐
(b) Sexual dysfunction or difficulty (duration _____)	☐	☐	☐
(c) Penile swelling (duration _____)	☐	☐	☐
(d) Masses or lesions (duration _____)	☐	☐	☐
(e) Other (please specify _____) (duration _____)	☐	☐	☐
12. JOINTS			
(a) Joint swelling (duration _____)	☐	☐	☐
(b) Joint stiffness (duration _____)	☐	☐	☐
(c) Other (please specify _____ (duration _____)	☐	☐	☐
13. ENDOCRINE SYSTEM			
(a) History of goitre (duration _____)	☐	☐	☐
(b) Diabetes (duration _____)	☐	☐	☐
(c) Excessive thirst (duration _____)	☐	☐	☐
(d) Excessive eating (duration _____)	☐	☐	☐
(f) Other (please specify _____ (duration _____)	☐	☐	☐
14. SLEEPING DISORDERS			
(a) Insomnia (duration _____)	☐	☐	☐
(b) Hypersomnia (duration _____)	☐	☐	☐
(c) Other (please specify) _____ _____) (duration _____)	☐	☐	☐

ETHELWYNN20.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

I PHYSICAL HEALTH ASSESSMENT (CONTINUED)

4(g) Last dental appointment
- ☐ <6 months ago
- ☐ >6 and <12 months ago
- ☐ >12 and <24 months ago
- ☐ >24 months ago
- ☐ Never visit a dentist

5(g) How often do you examine your breast
- ☐ Daily
- ☐ Once a week
- ☐ Once a month
- ☐ Sometimes
- ☐ It depends
- ☐ Never

5(h) How often do you have a mammogram?
- ☐ Yearly
- ☐ Every second year
- ☐ Never
- ☐ Other (please specify) _____

10.1 MENSTRUAL CYCLE

(a) Age of menarche
- ☐ <11 years
- ☐ ≥11 years <14 years
- ☐ ≥14 years <16 years
- ☐ ≥16 years

J. OBJECTIVE TEST MEASUREMENTS AND HEALTH STYLE: A SELF TEST

Measurements: Blood pressure, pulse, respiration, haemoglobin, haemo-glucotest, cholesterol and urinalysis for specifically blood, protein and glucose.

1. Blood pressure: Diastolic reading _____
- ☐ Normal 70 - 80 mmHg
- ☐ Below Normal <70mmHg
- ☐ Above Normal ≥90mmHg

2. Blood pressure: Systolic reading _____
(normal limits determined according to age)
- ☐ Normal
- ☐ Below normal
- ☐ Above normal

3. Pulse Rate _____ at rest
- ☐ Normal
- ☐ Bradycardia <60 per min
- ☐ Tachycardia >100 per min

ETHELWYNN21.DAT

ID Number

Do not mark outside this line

4. Respiration Rate _____ at rest

- ☐ Normal/Eupnoea 12 - 16 per min
- ☐ Bradypnea < 10 per min
- ☐ Tachypnoea > 20 per min

5. Haemoglobin _____

☐ Normal	:	Female: 12-16 gm/dl	Male: 14-18gm/dl
☐ Below normal	:	Female: <12gm/dl	Male: <14gm/dl
☐ Above normal	:	Female: >16gm/dl	Male: >18gm/dl

6. Haemoglucotest _____

- ☐ Normal (4-7mmol)
- ☐ Below normal (<4mmol)
- ☐ Above normal (>7mmol)

7. Urinalysis

(a) Blood : ☐ Yes ☐ No

(b) Protein : ☐ Yes ☐ No

(c) Glucose : ☐ Yes ☐ No

8. Cholesterol _____

- ☐ Less than 5,0 mmol/L = desirable
- ☐ 5,0 to 6.5 mmol/L = moderate risk
- ☐ 6.5 mmol/L to 7,8 mmol/L = high risk
- ☐ More than 7,8 mmol/L = very high risk

9. Height _____ Weight _____

- ☐ Normal weight with reference to height
- ☐ Under weight with reference to height
- ☐ Over weight with reference to height

10. Referred to a doctor? ☐ Yes ☐ No

11. Received health education? ☐ Yes ☐ No

ETHELWYNN22.DAT

ID Number

Do not mark outside this line

	Almost never	Sometimes	Almost always	Not applicable
A CIGARETTE SMOKING				
1. I avoid smoking cigarettes.	☐	☐	☐	☐
2. I smoke only low tar and nicotine cigarettes or I smoke a pipe or cigars.	☐	☐	☐	☐
B ALCOHOL AND DRUGS				
1. I avoid drinking alcohol beverages or I drink no more than one or two drinks a day.	☐	☐	☐	☐
2. I avoid using alcohol or other drugs (especially illegal drugs) as a way of handling stressful situations or the problems in my life.	☐	☐	☐	☐
3. I am careful not to drink alcohol when taking certain medicines (for example, medicine for sleeping, pain, colds, and allergies), or when pregnant.	☐	☐	☐	☐
4. I read and follow the label directions when using prescribed and over-the-counter drugs.	☐	☐	☐	☐
C EATING HABITS				
1. I eat a variety of foods each day, such as fruits and vegetables, whole grain breads and cereals, lean meats, dairy products, dry peas and beans, and nuts and seeds.	☐	☐	☐	☐
2. I limit the amount of fat, saturated fat, and cholesterol I eat (including fat on meats, eggs, butter, cream, shortenings and organ meats such as liver).	☐	☐	☐	☐
3. I limit the amount of salt I eat by cooking with only small amounts, not adding salt at the table, and avoiding salty snacks.	☐	☐	☐	☐
4. I avoid eating too much sugar (especially frequent snacks of sticky candy or soft drinks).	☐	☐	☐	☐

ETHELWYNN23.DAT

TEL: 083-456-2510, FAX: 021-8531969

ID Number

Do not mark outside this line

	Almost never	Sometimes	Almost always	Not applicable
D EXERCISE AND FITNESS				
1. I maintain a desired weight, avoiding overweight and underweight.	☐	☐	☐	☐
2. I do vigorous exercise for 15 to 30 minutes at least three times a week (examples include running, swimming, brisk walking).	☐	☐	☐	☐
3. I do exercises that enhance my muscle tone for 15 to 30 minutes at least three times a week (examples include yoga and calisthenics).	☐	☐	☐	☐
4. I use part of my leisure time participating in individual, family, or team activities that increase my level of fitness (such as gardening, bowling, golf, and baseball).	☐	☐	☐	☐
E STRESS CONTROL				
1. I have a job or do other work that I enjoy.	☐	☐	☐	☐
2. I find it easy to relax and express my feelings freely.	☐	☐	☐	☐
3. I recognize early, and prepare for, events or situations likely to be stressful for me.	☐	☐	☐	☐
4. I have close friends, relatives, or others whom I can talk to about personal matters and call on for help when needed.	☐	☐	☐	☐
5. I participate in group activities (such as church and community organizations) or hobbies that I enjoy.	☐	☐	☐	☐
F SAFETY				
1. I wear a seat belt while travelling in a car.	☐	☐	☐	☐
2. I avoid driving while under the influence of alcohol and other drugs.	☐	☐	☐	☐
3. I obey traffic rules and the speed limit when driving.	☐	☐	☐	☐
4. I am careful when using potentially harmful products or substances (such as household cleaners, poisons, and electrical devices).	☐	☐	☐	☐
5. I avoid smoking in bed.	☐	☐	☐	☐

ETHELWYNN24.DAT

TEL: 083-456-2510, FAX: 021-8531969